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ABSTRACT

This paper examines the influence of demographic factors on the contemporary South Australian education system, with emphasis on technical and further education (TAFE). Demography is essentially concerned with the study of changes in human populations, of birth rates and death rates, the timing of child bearing, internal migration and international migration. These factors influence the pattern of demand for educational services. Therefore, it is of fundamental importance that educational planners take note of the competent population projections. The bulge in population numbers represented by the "post war baby boom" has now reached adulthood. This age group is beginning to place pressure on the TAFE system. Another observable phenomenon is the increasing intermittent use of TAFE services by adults as they age. In summary, projections indicate that the population aged 30 and over will eventually dominate TAFE enrollments. Enrollments among those less than 30 years of age should be relatively static. Immigration to Australia from a wide range of overseas countries will require that further adjustments be made to the educational programs provided. (Author/RM)

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occasional paper number 2

THE INFLUENCE OF DEMOGRAPHIC FACTORS ON TAFE

AUTHOR :
WARD , B. J.

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This study is one of a series of papers prepared on request of the Director-General of Further Education for submission to the Committee of Enquiry into Education in South Australia. It has been prepared in consultation with a number of staff of the Department of Further Education but responsiblity for the content rests with the authors.

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- Dr. Hugo kindly agreed to read and comment upon a draft of this paper. Nevertheless the content remains the sole responsibility of the author.

SUMMARY

This paper examines the influence of demographic factors on the contemporary South Australian education system, with emphasis on technical and further education (TAFE). A broad definition of 'demography' is adopted to enable a balanced discussion of factors impinging on planning for provision of TAFE.

Demography is essentially concerned with the study of changes in human populations,of birth rates and death rates, the timing of child bearing, internal migration and international migration (Hugo 1980a, p.a.). These factors influence the pattern of demand for educational services in the following three ways: firstly, the absolute level of demand varies according to the rate of overall growth in the population; secondly, all educational services focus to some extent on particular age groups and therefore are affected by changes in the age structure of the population; thirdly, geographic shifts in the locational arrangement of the population alter the requirement patterns for educational services. Added to this is the recurring need to provide discretely for particular social/economic groups; women, migrants, the unemployed, are some of these.

It is of fundamental importance therefore that educational planners take studious analytical note of competent population projections, changes in population composition, and patterns of movement (migration). Population projections are now readily and regularly available for South Australia based on data from the Australian Bureau of Statistics. Their production is co-ordinated by a South Australian government working party and officially endorsed for use by all departments.

The number of places required in schools can be predicted from demographic data with some confidence because attendance is universal and mandatory between ages 6 and 14. In contrast, however, it is much more difficult to predict demand in the upper secondary, tertiary and further education sectors because as Hugo (1980a, p.1) points out "while strongly influenced by demographic factors (demand) will vary with changes in the propensity of potential students to seek education in the institutions of these sectors." It is readily apparent that this 'propensity' will fluctuate in response to a wide range of social, economic and government policy influences. There is evidence nonetheless that the size of the age-groups from which TAFE draws its 'clients', and the rate of demand for TAFE services, are increasing.

It has been widely observed of late (N.P.I. 1975 and Hugo 1980a) that the bulge in population numbers represented by the "post-war baby boom" has now reached adulthood, having passed beyond the ages normally associated with schooling, universities and CAE's. This age cohort is beginning to place pressure on the TAFE system - pressure which will continue as the bulge passes through the stages of the adult life cycle with concomitant changing demands for education. A separately observable phenomenon is the increasing, intermittent use of TAFE services by adults as they age. In summary, projections indicate that the population aged 30 and over will eventually dominate TAFE enrolments. Enrolments among those less than 30 years of age should be relatively static (assuming current participation rates).

Migration is another demographic determinant of some force. Since World War II there has been immigration from a wide range of overseas countries.

It is perhaps a truism that great cultural diversity has resulted from this new intake of population. Chapter 5 seeks to explore the number and composition of this important element of the state's population in order that its special claims on TAFE might be better understood.

The size and composition of the population influence the number and content of courses directly; the distribution of the population - the location of 'communities' and their composition - is an important determinant in the siting and nature of TAFE colleges. Chapter four addresses the technically complex area of internal migration. The D.F.E. system adequately accommodates population shifts.

The Department has a network of institutions covering the settled areas of the state. The individual institutions have associated branches and annexes mostly in rented premises. In addition there is an "Open College" with special overall responsibility for 'distance education'. This ensures a geographic flexibility enabling comfortable natural adjustment to all but major changes in population distribution.

There have been no major population shifts in the last decade other than in the Adelaide region. The new suburban developments are being catered for variously: in some cases by existing colleges - Port Adelaide is responsible for West Lakes and North Haven, Elizabeth services Salisbury which eventually will become a separate institution; in another case (Noarlunga) a new college is being built to service a large area previously under-provided.

Demographic influences on enrolment in TAFE, and notably the projected influence of population forecasts, may be contrasted with demographic influences on enrolments in the other education sectors. Despite the uncertainties associated with population projections, and the difficulty of predicting demand for education which is not compulsory, the various education sectors other than TAFE can be projected to experience a levelling off or decline in student numbers up to the turn of this century (Hugo, 1980a, p.50). This estimate is based on analysis of the age groups conventionally associated with the different education sectors with allowance for some observed shifts. (See chapter 2). Participation rates at universities and colleges of advanced education have been levelling out since at least 1976-77 partly because of changed public demand and partly because of deliberate government policy (Borrie 1978, in Harman et al, p.107). Combined with the observed demographic changes, this suggests the probability that little or no real growth can be expected in the next twenty years beyond the peaks of the early 1970s. This evitably leaves an even larger share of the post-school population to be serviced by the TAFE sector.

In summary, this paper emphasises that certain important changes occurring in the population and the demands these are placing on TAFE are in sharp contrast to the changes in all other sectors of education. Static or decreasing enrolments are the general expectation of all sectors except TAFE. TAFE is faced with the prospect of growth not only because of a vastly increased adult population but also because of growth in rates of participation across the whole adult age range. Special effects such as endemic unemployment, the changed status of women, and the increasingly diverse cultural mix associated with immigration (and the influx of refugees) compound the impact of population/age trends.

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1. INTRODUCTION

1·1 BACKGROUND

It is now common knowledge that during the last decade fundamental demographic changes have taken place in the Australian population. This was fully documented by the National Population Inquiry of 1975 (the Borrie Report). The basic elements in the change were identified as dramatic declines in fertility and immigration levels; these in turn have implications for change in other areas such as the size of the workforce and the demand for new facilities for school education, welfare and other activities Hugo (1980a and 1980b) has commented at some length on the consequences for education in particular. Hugo's comments are taken into account in this Occasional Paper.

The population changes noted by Borrie came as a shock to many planners accustomed to several decades of almost continuous population growth. Following this there has been a tendency for some workers to adopt an unrelievedly pessimistic view of population trends. Unqualified reliance on simple population projection has its dangers, however: no trend in population numbers has remained historically constant for as long as thirty years, as do some of the projections derived from Borrie; additionally, Borrie's projections are based on assumptions drawn from 1971 and earlier data. The 1976 census has revealed under-counting in both population and workforce (S.A. Development 1977, p.91): there is a need to modify the base data to which projections have been applied. Observed rates of change, however, have been within the projected range and government agencies such as the Australian Bureau of Statistics (ABS) and various state government working parties have monitored the situation and prepared series of revised projections. The latest of these have been used in this paper.

It is inevitable that there will be deviations from the Borrie population projections but the nature of those deviations cannot be predicted. In the absence of any better indicators the revisions prepared by the Bureau of Statistics remain the best basis presently available for planning, at least at the macro-scale relevant to much technical and further education (TAFE) activity. The status and methodology of the ABS work and the official population papers of the South Australian Government are accepted in this Occasional Paper without detailed evaluation or discussion. This is from a sense of proportion which indicates it would be wasteful to pursue the relatively small sources of error deriving from estimates of strictly demographic factors when the more important imperfections for TAFE projections arise from changes in client expectations and behaviour.

Compared with the schools system TAFE is concerned with relatively large geographic areas (fewer institutions each with large catchment areas) and the entire post-school population within them. The macro geographic scale of Department of Further Education (D.F.E.) operations with its interlocking network of colleges with branches and annexes covering the whole of South Australia, means that it is usually less difficult to deal with geographic shifts in population than in the school system. The TAFE market size is less susceptible to the shorter fluctuations to which the school system is so sensitive. The major emphasis in this paper is thus on those demographic factors which indicate possible changes firstly in the size of the total market for TAFE courses and secondly in the nature of client requirements.

1·2 SOURCES OF DATA, ASSUMPTIONS AND LIMITATIONS

Population projections in official use in South Australia are based on the Australian Bureau of Statistics "median" projections published in Catalogue No. 3214.0, and developed to further detail by a state government working party. These are published as "Population Projections 1978 - 2011: South Australia and Adelaide Statistical Division". That document states (p.1) "the projections have been made using the component method, the base year (1978) population in single years of age is brought forward year by year by applying assumptions about future trends of fertility, mortality and migration". Although three levels of projection were produced in that study, only the median which has been selected as "the most likely" outcome, has been used here. The high and low estimates may be taken as the range within which probable events can be expected to fluctuate.

The fertility rates applied throughout the projection period for South Australia are slightly lower than those applied at the national level, reflecting the differences which have been evident since 1970.

The survival ratios used to project mortality were for 1975 and 1976 only and were assumed to apply for the whole projection period, except that infant mortality was assumed to continue to decline. South Australia's assumed mortality rates are slightly lower than the national average, because of differences exhibited in recent years.

Three sets of migration assumptions were made in order to produce the low, median and high projections taking account of both overseas and interstate movements and the age-sex structure of known recent population changes. Migration levels fluctuate significantly and unpredictably and therefore the assumptions used represent subjective judgements as to what is the most likely long-term average result. The last seven years have averaged a net gain for South Australia of less than 5 000 persons per annum. This contrasts with the boom years of the early 1960's when South Australia's net gains were commonly 7 to 8 thousand per annum and proportionately greater than the national average. Presumably such conditions could return under some circumstances.

2. DEMOGRAPHIC CHANGES AND THEIR RELEVANCE TO T.A.F.E.

2·1 ACTUAL ENROLMENT PROJECTIONS

Tables 1 and 2 show the median population projections for South Australia until 2011 both by census and TAFE age groupings. The latter have been further summarised in Table 3. Table 4 shows actual TAFE enrolments in South Australia for 1978 and 1979 and projected enrolments to 1991, all in age and sex categories. The patterns are shown diagrammatically in Figure 1. There are two problems which must be taken into account when interpreting this data: firstly, the actual enrolments contain between a quarter and a third of unknown age or sex which have been distributed proportionately across the knowns; secondly, the projections are necessarily based upon certain assumptions, in this case that some observed shifts in particpation by age and sex would continue to shift. The methodology and associated problems are explained in Appendix A and Appendix B.

2·2 STATISTICAL SUMMARY OF S.A. PROJECTIONS 1978 - 2001

Rates of participation in TAFE are generally expected to increase slightly (see Figure 2 - Figure 1 shows absolute enrolment numbers). However, some noteworthy shifts are projected to occur within the age-sex distribution. These are listed below:

- The various groups below thirty years of age show only minor changes.
- Both males and females under twenty years both decline slightly.
- Twenty to thirty year olds are expected to increase participation to the early 1980's and possibly taper off thereafter.
- Groups above thirty years are likely to continue to increase participation steadily, with those over sixty possibly decreasing in the late 1980s.
- Total female enrolments are projected to continue to exceed total male enrolments.
- The bulk of future growth in enrolments is expected from those over 30 years of age with numbers below that age remaining relatively static.

2.2.1. OVERVIEW BY MAJOR ECONOMIC GROUPINGS OF THE POPULATION

Between 1978 and 2011 the following overall shifts are projected by the South Australian Government working party responsible for official population projections.

- the labour force (age cohort 15-64)
  to rise from 843 480 (65% of the population to 1 110 368 (68.7% of the population) - an increase of 32%. TAFE enrolments can be expected to increase at least by this same percentage. Forces supplementary to the demographic could possibly double this percentage e.g. economic demands

TABLE 1

SOUTH AUSTRALIA : STATE MEDIAN PROJECTIONS OF POPULATION 1978 - 2011

AGE GROUP	1978	1979	1980	1981	1986	1991	1996	2001	2006	2011
0 - 4	98 314	96 648	96 271	96 969	108 501	111 925	109 445	104 046	100 772	012 861
5 - 9	113 116	111 084	108 080	104 620	97 176	108 478	112 099	109 630	104 246	100 981
10 - 14	114 143	113 216	113 050	113 349	104 227	96 792	108 078	111 694	109 229	103 852
15 - 19	120 420	120 290	119 291	117 654	113 333	104 233	96 829	108 079	111 680	109 222
20 - 24	111 798	114 411	117 025	119 372	119 144	114 846	105 793	98 430	109 620	113 201
25 - 29	106 048	107 075	108 534	110 151	122 044	121 814	117 533	108 523	101 193	112 332
30 - 34	96 490	100 818	104 044	106 154	112 085	123 920	123 686	119 426	110 464	103 159
35 - 39	76 969	79 545	82 873	87 196	107 041	112 934	124 700	124 461	120 270	111 314
40 - 44	68 493	69 930	71 524	73 269	87 327	106 986	112 827	124 489	124 228	120 093
45 - 49	69 484	68 007	67 001	66 532	72 563	86 412	105 761	111 517	122 972	122 725
50 - 54	73 137	72 884	72 158	71 032	65 086	70 970	84 471	103 308	108 922	120 080
55 - 59	65 621	67 614	69 078	69 906	68 346	62 672	68 331	81 291	99 333	104 726
60 - 64	55 020	55 233	56 098	57 765	65 972	64 463	59 209	64 530	76 669	93 515
65 - 69	46 276	47 842	49 071	49 830	52 682	60 036	58 612	53 970	68 789	69 722
70 - 74	33 013	34 293	35 564	36 885	42 600	45 041	51 232	49 943	46 117	50 241
75 +	43 943	44 747	45 691	46 768	53 977	62 549	69 172	77 149	80 364	78 557
TOTAL	1 292 285	1 303 639	1 315 354	1 327 453	1 391 904	1 454 070	1 507 777	1 550 485	1 584 871	1 616 584

SOURCE TABLES 1 & 2): S.A. Govt. "Pop. Proj. 1978-2011", 1979.

NOTE: Totals only approximate to the summation of columns due to projection methodology.

TABLE 2

SOUTH AUSTRALIA : STATE TAFE AGE GROUPINGS OF POPULATION (SPECIAL SUMMARY) 1978 - 2011

AGE GROUP	1978	1979	1980	1981	1986	1991	1996	2001	2006	2011
0 - 14	325 573	320 948	317 401	314 938	309 704	317 195	329 622	325 370	314 247	307 694
	25.2%	24.6%	24.1%	23.7%	22.3%	21.8%	21.9%	21.0%	19.8%	19.0%
15 - 19	120 420	120 290	119 291	117 654	113 333	104 233	96 829	108 079	111 680	109 222
	9.3%	9.2%	9.1%	8.9%	8.1%	7.2%	6.4%	7.0%	7.1%	6.8%
20 - 29	217 846	221 486	225 559	229 523	241 188	236 660	223 326	206 953	210 813	225 533
	16.9%	17.0%	17.2%	17.3%	17.3%	16.3%	14.8%	13.4%	13.3%	14.0%
30 - 59	450 194	458 798	466 678	474 089	512 448	563 894	619 776	664 492	686 189	682 097
	34.8%	35.2%	35.5%	35.7%	36.8%	38.8%	41.1%	42.9%	43.3%	42.2%
60 +	178 252	182 115	186 424	191 248	215 231	232 089	238 225	245 592	261 939	292 035
	13.8%	14.0%	14.2%	14.4%	15.5%	16.0%	15.8%	15.8%	16.5%	18.1%
TOTAL	1 292 285	1 303 639	1 315 354	1 327 453	1 391 904	1 454 070	1 507 777	1 550 485	1 584 871	1 616 584

TABLE 3

SOUTH AUSTRALIA : STATE TAFE PROJECTED CHANGES IN POPULATION 1978 - 2011

AGE GROUP	1978 - 1981	1981 - 1986	1986 - 1991	1991 - 1996	1996 - 2001	2001 - 2006	2006 - 2011
0 - 14	-10 635 -3.3%	-5 234 -1.7%	+7 491 +2.4%	+12 427 +3.9%	-4 252 -1.3%	-11 123 -3.4%	-6 553 -2.1%
15 - 19	-2 766 -2.3%	-4 321 -3.7%	-9 100 -8.0%	-7 404 -7.1%	+11 250 +11.6%	+3 601 +3.3%	-2 458 -2.2%
20 - 29	+11 677 +5.4%	+11 665 +5.1%	-4 528 -1.9%	-13 334 -5.6%	-16 373 -7.3%	+3 860 +1.9%	+14 720 +7.0%
30 - 59	+23 895 +5.3%	+38 359 +8.1%	+51 446 +10.0%	+55 882 +9.9%	+44 716 +7.2%	+21 697 +3.3%	-4 092 -0.6%
60 +	+12 996 +7.3%	+23 983 +12.5%	+16 858 +7.8%	+6 136 +2.6%	+7 367 +3.1%	+16 347 +6.7%	+30 096 +11.5%
TOTAL	+35 168 +2.7%	+64 451 +4.9%	+62 166 +4.5%	+53 707 +3.7%	+50 708 +3.4%	+26 386 +1.7%	+31 713 +2.0%

SOURCE : S.A. Govt. "Pop. Proj. 1978-2011", 1979.

Figure 1

SOUTH AUSTRALIA : COURSE ENROLMENTS BY AGE AND SEX GROUPS IN TECHNICAL AND FURTHER EDUCATION 1978 TO 1991

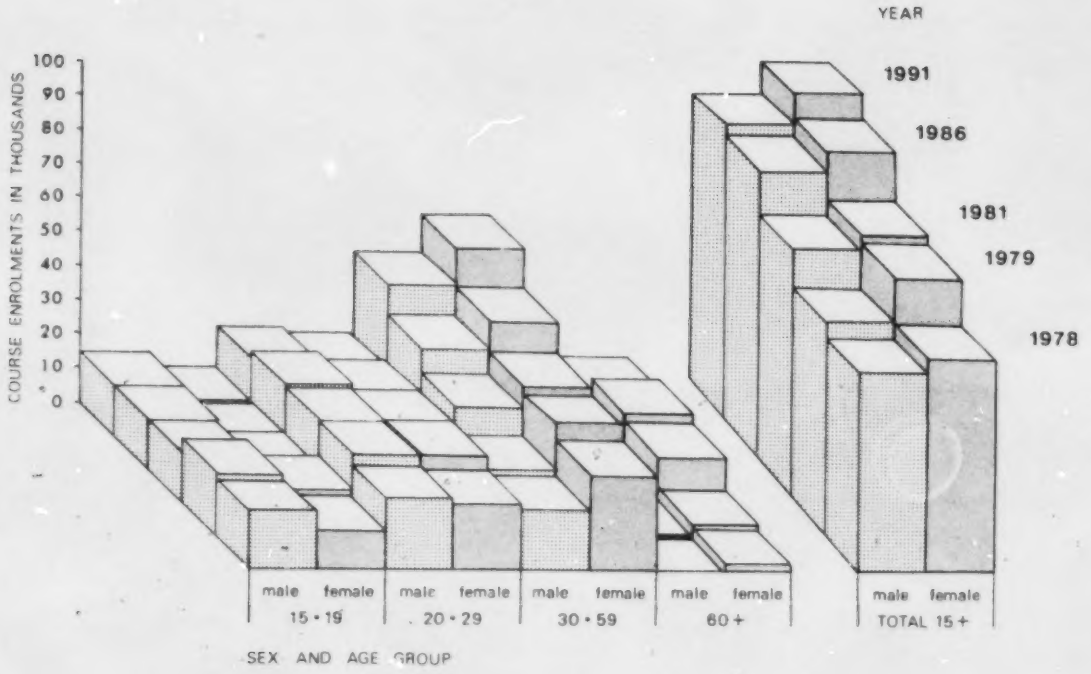


TABLE 4 SOUTH AUSTRALIA : STATE TAFE COURSE ENROLMENTS ACTUAL AND PROJECTED 1978 - 1991

AGE GROUP		ACTUAL				PROJECTED					
		1978		1979		1981		1986		1991	
		%	NO.	%	NO.	%	NO.	%	NO.	%	NO.
15-19	male	29.9	18 338	29.8	18 303	24.6	14 936	24.7	14 466	27.2	14 547
	female	20.7	12 240	23.9	14 079	18.4	10 457	18.5	10 262	21.0	10 626
	total	25.4	30 578	26.9	32 382	21.6	25 389	21.7	24 728	24.2	25 179
20-29	male	19.7	21 620	21.5	23 941	21.3	24 257	21.3	25 677	19.0	22 581
	female	18.4	19 935	22.2	24 374	21.1	23 959	19.6	23 048	18.4	21 045
	total	19.1	41 555	21.8	48 315	21.2	48 216	20.4	48 726	18.7	43 613
30-59	male	8.1	18 490	9.0	20 812	12.2	29 010	14.0	35 809	16.1	44 951
	female	12.8	28 396	15.2	34 426	15.0	34 947	17.3	43 812	19.9	55 667
	total	10.4	46 886	12.0	55 238	13.6	63 963	15.6	79 646	18.0	100 604
60+	male	1.7	1 288	2.3	1 797	9.4	7 805	13.8	12 992	10.3	10 587
	female	3.0	3 032	4.4	4 528	9.8	10 417	14.4	17 326	11.0	14 380
	total	2.4	4 320	3.5	6 325	9.6	18 216	14.1	30 323	10.7	24 974
TOTAL 15+	male	12.5	59 736	13.4	64 853	15.3	75 982	16.8	88 958	16.7	92 670
	female	13.0	63 604	15.6	77 407	15.6	79 810	17.3	94 419	17.7	101 749
	total	12.8	123 339	14.5	142 260	15.5	155 768	17.0	183 391	17.2	194 372

SOURCE: (a) Annual TAFEC Survey 1978
(b) Unpublished projections prepared in Research Branch, DFE Adelaide (Glowik, 1978).

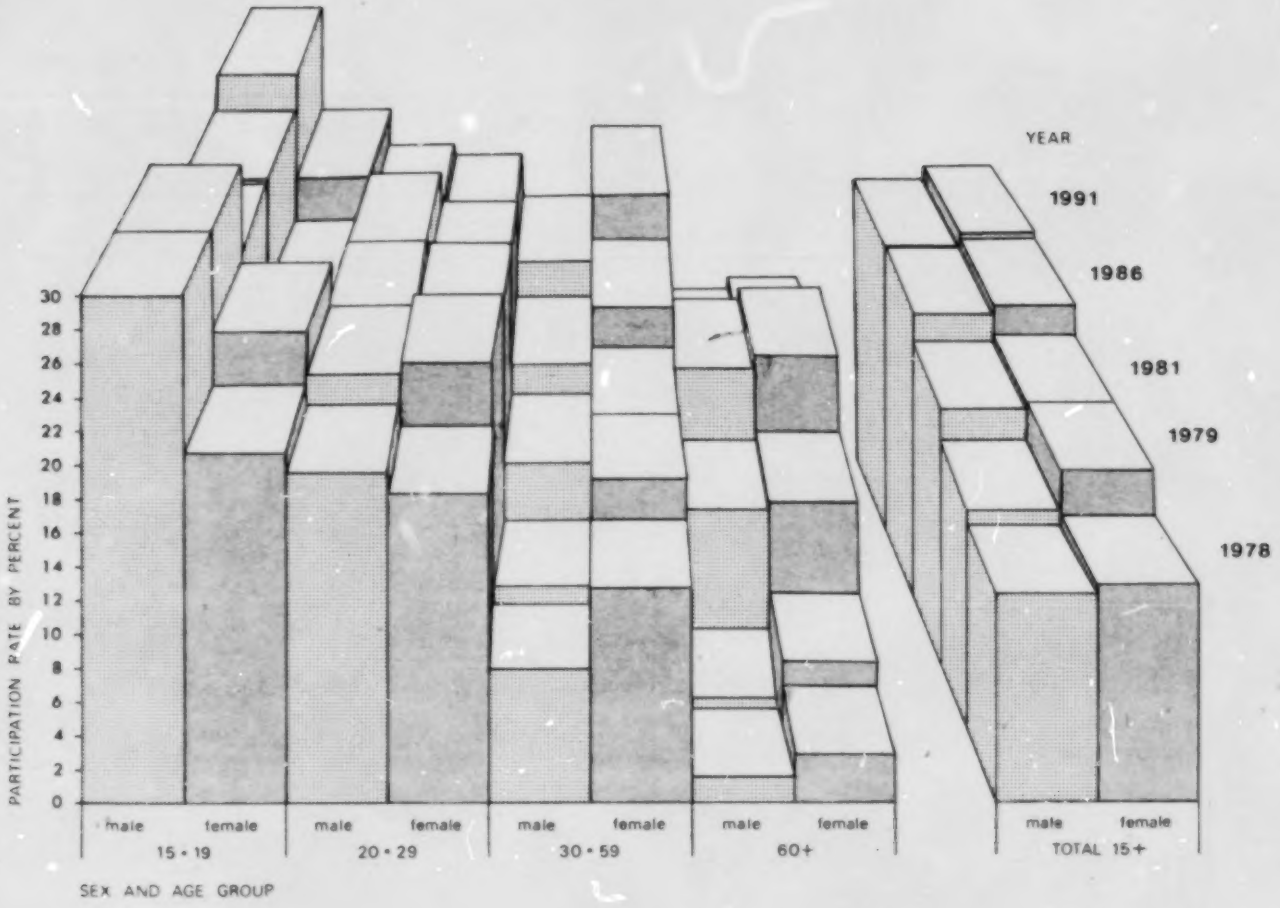
NOTES: (1) The participation rate used in this table is the "medium" selected from an exercise which ranged from "constant" to "high".

(2) Totalsdo not match the sum of the parts because they have been separately calculated by application of participation rates to raw population data.

(3) A "disturbance" factor present in this table is brought about by the statistical distribution of about 20 per cent age and/or sex unknown in 1978 and 1979. These were proportionately allocated across the range.

Figure 2

SOUTH AUSTRALIA : PARTICIPATION RATES BY AGE AND SEX GROUPS IN TECHNICAL AND FURTHER EDUCATION 1978 TO 1991



for retraining and government incentives to match labour training to technological change.

- the "retired group" (65 years and over)
  to rise from 123 232 (9.5% of the population) to 198 521 (12.2% of the population) - an increase of 61%. This section of the population could logically become part of a major new area of expansion in TAFE community services.

- the pre-school and school age group (0-14)
  to decline from 325 573 (25.2% of the population) to 307 694 (19.1% of the population) - a decrease of 5.5%. This is the justification for the projected "no expansion" in compulsory schooling.

- the total population
  to increase from 1 292 285 to 1 616 584 (25% increase).

2.2.2. OVERVIEW BY TAFE (TECHNICAL AND FURTHER EDUCATION) AGE-GROUPS

Between 1978 and 2011 the following overall shifts are projected.

- 15-19 age group
  to decline steadily from the present 120 000 to a low in 1996 of about and to increase thereafter. As a percentage of the total population this group will decline consistently from 9.3 in 1978 to 6.8 in 2011, thus reducing the traditional source of supply of apprentices. As indicated elsewhere, even if the present number of apprentices is to be merely maintained, it will be necessary to draw them from a much wider age-range and to alter the system and conditions to make this possible. The educational problems and challenges associated with high rates of unemployment must be superimposed on the traditional educational scenario for this group. (See 2.3 below).

- 20-29 age group
  to increase between 1978 and 1986 from 218 000 to 240 000 and then to steadily decline until about the turn of the century to about 207 000, after which further increases should occur. This group which traditionally supplies the bulk of vocational students in Streams 2 and 4, (See Appendix C and Appendix D) will decline slowly after 1986. Streams 2 and 4 are likely to have increased enrolments despite the loss of students under 30 years because of increased numbers from older groups.

- 30-59 age group
  to increase steadily throughout the period from a total in 1978 of 450 194 to 686 189 in 2006 (52% increase) and its share of the total population to rise from 34.8% to 43.3%.

  This is the age group which inevitably will bear the main brunt of technological change, more frequent job change, retraining and earlier retirement. Flexible, sensitive and readily available education will increasingly be required to assist people to adjust both vocationally and socially. Of significance too is the increasing sense of volition in this age group: participation in further education is apparently seen by growing numbers as a desirable, normal activity. (See also para 2.5).

- 60 years and over group
  increases steadily throughout the period from a total in 1978 of 178 252 to 292 035 (64% increase); its share of the total population rises from 13.8% to 18.1%.

  Already this age group is increasing its share of TAFE enrolments. As the more highly educated later generations reach retirement, growth may be expected in the demand for recreational education provided by TAFE. Some of the demand will be for 'vocational' courses taken for 'non-vocational' reasons. The limit to enrolment growth here is rather uncertain. (See para 2.5).

2·3 UNEMPLOYMENT *

The current high rate of unemployment in Australia has caused governments inter alia to expand and diversity training opportunities particularly through TAFE: initiatives will no doubt continue unabated for some years.

The accompanying table (Table 5) shows that in September, 1980 about fifty thousand (or 8.7 per cent of the labour force) were unemployed in South Australia. More than half of all the unemployed were less than twenty-five years of age, comprising more than one fifth of those so aged in the labour force (See Table 6). Government initiatives aimed at alleviating the effects of unemployment have brought a significant number of unemployed youth into contact with TAFE. It might well be argued that this is the age-group traditionally most heavily engaged in TAFE courses, but there is currently almost a ferment of activity to 'redress' unemployment through education, which has highlighted the significance of the relationship between TAFE and school leavers and young adults. The decline in absolute numbers in the younger age groups could be offset to an extent by higher participation rates, occasioned by a combination of government and TAFE initiatives and a greater propensity among youth to secure a future through greater educational preparation. This is of course speculation, but it does highlight the volatile nature of the forces which influence TAFE enrolments at the micro level. At the macro level, as suggested, TAFE is buffeted by the general nature of its services and clientele.

2·4 WOMEN IN TAFE

As noted earlier female enrolments in TAFE exceed male enrolments and this is projected to continue. It is almost a truism to note that a major social/demographic influence is the changing role of women. The magnitude of this change is amply demonstrated by the huge increase in the level of participation of women in the Australian workforce (see Hugo, 19801, p.11).

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* Statistics relating to 'unemployment' are complicated by a range of definitional problems which are set out in various A.B.S. publications (eg "The Labour Force Australia, September 1980", Cat. No. 6203.0, (pp3, 4). The "Labour Force" consists of both the "employed" and those officially defined as 'unemployed'.

TABLE 5 SOUTH AUSTRALIA: UNEMPLOYED PERSONS SEPTEMBER 1980

	LOOKING FOR FULL-TIME WORK			LOOKING FOR PART-TIME WORK	LOOKING FOR FULL-TIME AND PART-TIME WORK
	AGE GROUP				
	15-19	20+	total		
NUMBER	16 600	27 400	44 000	6 100	50 100
RATE (% of labour force in age group)	25.8	6.2	8.7	6.1	8.3

SOURCE: Table 2 "Unemployment, Australia, October, 1980." ABS Canberra, Cat. No. 6201.0, 6 November, 1980.

TABLE 6 SOUTH AUSTRALIA: UNEMPLOYED PERSONS BY AGE AND SEX AUGUST 1980

AGE GROUP	(a) UNEMPLOYED			PERCENT OF AUSTRALIAN UNEMPLOYED	LABOUR FORCE			(b) PERCENT OF AUSTRALIAN LABOUR FORCE
	NUMBER				NUMBER (and percent unemployed)			
	male	female	total		male	female	total	
15-19	9 100	9 100	18 200	13.9	41 300 22.0	37 300 24.4	78 600 23.2	10.1
20-24	6 900	3 900	10 800	12.3	52 900 13.0	40 600 9.6	93 500 11.6	9.3
25-34	6 000	4 700	10 700	13.5	99 400 6.0	55 400 8.5	154 800 6.9	8.9
35+	4 800	3 200	8 000	8.5	181 600 2.6	89 600 3.6	271 300 2.9	8.7
TOTAL	26 800	20 900	47 700	12.2	375 300 7.1	222 800 9.4	598 100 8.0	9.0

SOURCES: (a) The Labour Force Australia, August 1980, ABS Cat. No. 6203.0

(b) "The Labour Force" ABS. Cat. No. 6201.4, August 1980.

Married women aged 20 to 24 years, for example, have almost trebled their rate of participation in the workforce during the last twenty years. This is reflected in enrolment patterns in TAFE where women are increasingly evident in pre-vocational, preparatory and vocational courses. This major issue is analysed for its impact on TAFE in Occasional Paper No. 5 in this series.

2·5 SUMMARY

The preceding discussion has addressed the likely consequences for TAFE in South Australia of population projections for the thirty year period to 2011.

The annual growth in population is expected to decrease from 0.9% per annum in 1979 to 0.4% per annum by 2011. This results from the expectation of continued low fertility and moderate migration. As a consequence some important changes will occur in the age structure of the population, changes which are of significance for the workforce and for adult educational needs such as those provided for by TAFE.

The proportion of the population under 15 years of age (related to school attendance) is expected to decrease significantly from over 25% to 19%. The absolute numbers are expected to fluctuate between 310 000 and 330 000. During the same period the 60 and over age-group is likely to increase its share of the total population from 13.8% with an absolute growth of about 64 per cent (about 114 000). This is a substantial increase; it may well be accompanied by pressures from the retired population for a greater slice of the TAFE educational cake. Such an expectation should however be a guarded one. The present minimal participation of the 60-plus age group is notable, and perhaps gives cause for concern in a Department which is fundamentally concerned with assisting the individual to enjoy a stimulating and productive role in society, regardless of age. A recent study has indicated that the reluctance of the elderly in general to avail themselves of special educational opportunities derives in part from an outmoded notion of retirement per se (it is seen more as a "retreat" from society), and from a similarly outmoded concept of education as being something for the young. The Department has taken a range of initiatives in recent years to overcome these very real barriers to further education.

The apprenticeable age group (15-19) has already begun its expected steady absolute decline, thus requiring a greater proportion of that group to enter apprenticeships if the numbers in such training are to be kept at present levels - assuming apprenticeships will continue to be restricted to this group. If as expected sufficient numbers cannot be maintained in training for basic trades (Stream 3) from the traditional age group then the age range and conditions of entrance may have to be extended. (These and perhaps more radical changes are implicit in an Industrial and Commercial Training Bill proposed for South Australia.)

The age group which presently provides the bulk of vocational students in Streams 2 and 4 (namely 20-29), is expected to peak about 1986 and then decline slightly to about present levels at the turn of the century. Unemployment in this group, but more particularly in the 15-19 age group, will be reflected in demands for special education. This may offset the absolute decline in numbers in these groups.

By far the largest TAFE age group in both numbers and span is that from 30 - 59 years. It is expected that this group will experience consistent growth until the year 2006 in sharp contrast with the younger groups. It is likely to increase by almost a quarter of a million (52% growth); its share of the South Australian population could grow from 34.8% to 43.3% to a peak total of 686 000 in 2006. This represents a huge growth in a potential market group (or target) for courses in TAFE. The nature of educational needs within the group is of course difficult to forecast with confidence, but likely needs/demands include:

- training for people forced to change jobs either within their places or sphere of employment or in an effort to re-enter the workforce
- increased demand for leisure-type activities or for vocational studies taken for interest
- increased demand for skill and 'personality maintenance' courses from growing numbers of people disadvantaged by employment scarcity and earlier retirement.

A general comment can be made regarding the comparative participation rate of the 30-59 age group. It is suggested that major evidence for the success (or otherwise) of a recurrent education programme will be evidenced in this age group. Persons below the age of 30 can reasonably be expected to be more attuned to the value and purpose of education, to be under a degree of social and personal coercion to gain professional qualifications, and furthermore, to be engaged in preparing themselves for a first career. This pressure is likely to grow due to social and economic conditions. It is reasonable to suggest that these factors are not particularly applicable to the plus-30 age group. The growing participation rate of the 30-59 age group - though to a degree spurred by economic uncertainty - must be considered significant evidence of a trend in the community towards recognition of further education as an avenue for realisation of personal and professional goals on a continuing basis.

3. EFFECTS ON OTHER SECTORS OF EDUCATION

3·1 PROJECTED TRENDS IN SCHOOL RETENTION RATES AND EFFECTS ON T.A.F.E.

Table 7 indicates the projected participation rates by age in secondary schools to 1983. This information was prepared in the Research and Planning Directorate of the Education Department of South Australia.

The number attending school is seen to decrease for two reasons. The table indicates that participation rates for students aged 16 and over in South Australian secondary schools are expected to decrease slightly; it will also be noted that the population of the 16-18 age cohorts (see Table 8) is expected to decrease. The net effect is that there may be little increase in the number of school-leavers i.e. from the T.A.F.E. viewpoint, little increase in the number of potential students from this source. (The rate of participation could of course increase - see for instance para. 2.3.)

In effect the pool from which school leavers offer for T.A.F.E. is expected to remain relatively static to 1983 - consistent with earlier statements on the apprenticeable age groups.

3·2 PROJECTED TRENDS IN UNIVERSITIES AND COLLEGES OF ADVANCED EDUCATION

The aim of this short section is to justify with reference to universities and CAEs the claim already made in this paper that all sectors of education other than T.A.F.E. are likely to be static or to experience little real growth in enrolments in the next two decades. Enrolment numbers in the tertiary sector* are the composite result of three main factors of which

TABLE 7 AGE PARTICIPATION RATES FOR ALL SOUTH AUSTRALIAN SCHOOLS 1976 - 1983

	YEAR	MALES				FEMALES			
		15	16	17	18+	15	16	17	18+
ACTUAL	1976	.871	.594	.270	.083	.855	.588	.231	.048
	1977	.838	.574	.249	.066	.863	.584	.237	.041
	1978	.875	.588	.244	.062	.879	.611	.238	.041
	1979	.873	.587	.233	.059	.872	.587	.238	.044
PROJECTED	1980	.870	.585	.226	.055	.872	.587	.235	.041
	1981	.869	.585	.225	.050	.872	.587	.235	.041
	1982	.860	.585	.225	.050	.860	.587	.235	.041
	1983	.870	.578	.225	.050	.872	.579	.235	.041

SOURCE: F. Kriven, Research and Planning, S.A. Education Dept., 30.1.80.

* T.A.F.E. is acknowledged as part of the tertiary sector federally and in most states. However in common usage 'tertiary education' means 'higher education' and it has that meaning in this section.

TABLE 8 POPULATION IN SOUTH AUSTRALIA AGED 15 TO 19 YEARS 1976 - 1983

	YEAR	MALES				FEMALES			
		15	16	17	18	15	16	17	18
ACTUAL	1976	12 569	12 232	11 967	11 635	12 023	11 958	11 869	11 466
	1977	12 385	12 609	12 283	12 081	11 842	12 061	11 931	11 895
	1978	12 340	12 409	12 359	12 241	11 684	11 849	11 883	11 871
	1979	12 142	12 335	12 407	12 362	11 437	11 691	11 862	11 903
PROJECTED	1980	11 908	12 137	12 332	12 410	11 169	11 445	11 704	11 882
	1981	11 647	11 903	12 135	12 335	10 944	11 177	11 458	11 725
	1982	11 527	11 642	11 901	12 139	10 803	19 952	11 190	11 478
	1983	11 560	11 522	11 641	11 905	10 852	10 811	10 965	11 211

SOURCE: F. Kriven, Research and Planning, S.A. Education Dept., 30.1.80.

demography is but one. The other related factors are government policy and changing participation rates.

It has been pointed out by Borrie (1978, p.107) that the levelling out of participation rates in the intake of tertiary (higher education) students is due, at least in part, to the government policy of placing limitation on entry to tertiary education. Given the prospect of population decline in those age groups from which tertiary students traditionally come, only increased participation from those and older groups could avert a general decline in enrolments.

Decisions have been taken already to hold intakes of university students at the 1976 level and of advanced education students at the 1977 level. This leads to the following obvious conclusion expressed in the "TEC Report for the 1979-81 Triennium" (cited by Borrie, 1978, p.107):

> "If these levels are maintained over the next few years, virtually all growth in universities and colleges will cease."

Universities and Colleges of Advanced Education are now funded entirely by the Federal government and so the South Australian situation is likely to be subject to the same general limitations as the national. The accompanying tables (Tables 9 and 10) show for the whole of Australia the actual and possible future enrolments. It is demonstrated that only modest growth is possible even under the favourable assumptions of a moderate migration intake from overseas and increasing participation across all age groups. With neither of these growth factors operating and participation rates held at 1973 levels total enrolments can be expected to fluctuate by about five per cent during the next twenty five years.

Even if government policy toward the academic institutions were to change it seems likely that the uncertain employment prospect for graduates would continue to deter some prospective students. One thing, however, is clear: no one talks seriously of a return to the huge growth in enrolments of the 1960's and early 1970's. The overall education outlook has been summarised by Hugo (1980b, p.69):

TABLE 9

AUSTRALIA : PROJECTED TERTIARY ENROLMENTS FOR UNIVERSITIES AND COLLEGES OF ADVANCED EDUCATION, PERSONS AGED 17 YEARS AND OVER, AT SPECIFIED PARTICIPATION RATES 1976 - 2001

YEAR	1973 PARTICIPATION RATES		INCREASED PARTICIPATION RATES	
	NO IMMIGRATION	50,000 IMMIGRATION	NO IMMIGRATION	50,000 IMMIGRATION
1976	203 984	207 428	222 130	225 887
1981	218 712	227 055	271 719	282 085
1986	215 167*	228 647	285 370	303 276
1991	223 416	242 168	296 087	321 039
1996	207 815*	231 440*	275 667*	307 088*
2001	209 242	237 769	277 655	315 501

* Represents a decrease in numbers since previous census years.

SOURCE: National Population Inquiry (1975,397) as cited by Hugo (1980b)p.68.

TABLE 10

AUSTRALIA : ACTUAL AND PROJECTED PERCENT OF EACH AGE GROUP ENROLLED IN TERTIARY EDUCATION FOR UNIVERSITIES AND COLLEGES OF ADVANCED EDUCATION USED IN N.P.I. PROJECTIONS 1968 - 2001

AGE	MALES					FEMALES				
	ACTUAL RATES		PROJECTED RATES			ACTUAL RATES		PROJECTED RATES		
	1968	1973	1976	1981	1986 - 2001	1968	1973	1976	1981	1986 - 2001
17	6.0	7.9	8.2	9.3	9.6	4.1	6.1	7.0	8.6	9.4
18	11.9	14.3	15.5	17.6	18.3	6.8	9.8	10.8	12.8	13.8
19	12.0	14.5	16.0	18.0	18.6	5.6	9.2	10.0	11.9	13.0
20	10.5	13.2	14.1	16.0	16.6	4.2	7.3	7.2	8.2	8.9
21	9.6	10.9	12.2	13.8	14.5	2.9	4.5	4.8	5.6	6.4
22	7.7	9.1	10.0	10.9	11.5	1.8	2.9	3.2	3.8	4.2
23	6.4	7.2	7.6	8.5	8.8	1.3	2.1	1.9	2.2	2.4
24	5.1	6.1	6.7	7.5	7.7	1.1	1.6	2.5	1.8	1.9
25-29	3.2	4.0	4.5	5.1	5.6	0.7	1.0	1.2	1.5	1.6
30-34	3.3	3.8	4.3	4.7	5.1	1.1	1.9	1.9	2.2	2.4

SOURCE: National Population Inquiry (1975,396) as cited by Hugo (1980b)p.68.

> "with respect to the conventional age groups in which South Australians have in the past entered primary and secondary schools, universities, and CAEs there is to be a rapid deceleration of growth rates with periods of absolute decline in student numbers up to the turn of the century."

Hugo (1980b, p.71) goes on to draw attention to the contrasting situation facing technical and further education with the need to cater for increasing numbers in "catch up" education and services to the elderly as well as technicians and tradesmen. The T.A.F.E. enrolment projections already discussed take only modest account of these forces.

4. INTERNAL MIGRATION

4.1 INTRODUCTION

4.1.1. REASONS FOR CONSIDERATION OF 'MIGRATION'

Human populations undergo change in size and composition through two major processes: natural increase, which has been given some attention already in this paper, and migratory movement which is introduced here. The possible combined effects of migratory movements upon a population may be summarized in the following terms:

- size - net gain, net loss, maintenance of equilibrium
- change in characteristics (some common characteristics are - age, sex ratio, occupation, marital status, religion, education, language, nationality, health, income).

For example, in his study of internal migration in South Australia from 1961-1966 Hugo (1974 p.91) showed that :

> "the net migration losses experience by rural communities are highly selective of females and of the school-leaving age groups. As a result the population of many rural areas is characterized by an increasing sex imbalance and general ageing compared to the State's urban areas."

The type of activity people undertake in TAFE differs according to age and sex. It is apparent therefore that when there are shifts in the age-sex composition of a population it is inevitable that public demand will operate toward readjustment of TAFE programmes to cater for the new circumstances. The problem in terms of planning is to identify for given times and places the size and nature of likely shifts in demand.

4.1.2 TYPES OF MIGRATION

In simple terms 'migration' may be defined as any 'permanent or semi-permanent change of place of residence' (Lee, 1966, p.50).

Problems arise in the application of this definition through the interpretation of 'permanent' because the word has connotations not only of 'long term' but also of the motivation and intention of the migrant. A short-term resident and a long-term tourist worker may differ only in the original intention underlying the decision to move. In statistical analysis migratory movements are usually classified broadly with reference to whatever official boundaries are selected for the particular study (Hagerstrand, 1957, p.28). In most writings, therefore, migration is said to occur only when moving necessitates the crossing of an official statistical boundary (Ward, 1975, p.8).

The possible distance covered in a single act of migration ranges from extremely short (to the house next door) to half-way round the world: a micro-macro distance spectrum. The most common classificatory categories

are based upon political units but they also crudely reflect the distance spectrum:

- inter-national migration (between nations)
- internal migration (within a nation or state)
- intra-urban migration (within an urban area).

Each of these categories is discussed later with special reference to South Australia.

4.1.3 SOME GENERAL FEATURES OF MIGRATION

Three general features of migration patterns are worthy of note here: the frequency of moves in the population, the nature of resulting "flows", and the distribution of distances moved.

a. Frequency of migration

A considerable part of the Australian population is known to change residence in any given time span. In Australia as a whole at least 15 to 17 per cent of those aged 15 years and over have changed their usual residence in a given year (A.B.S. Catalogue No. 3408, Table 1). In South Australia the annual rate is currently below the national figure, being 15.1% compared with 16.7%. (See A.B.S. Cat. No. 3408, Table 3).

b. Migration 'flows'

If movement is considered in aggregate as sets of flows between geographic areas there are always movements in both directions, that is, both flows and counter-flows. It is the relative balance over time between these multiple flows which results in net gain or net loss or equilibrium in a population as a whole or some component of it. Hugo (1974, p.87) observed that in South Australia between 1961 and 1966 "although movements from rural areas and smaller country towns toward larger centres are dominant there are less strong but nevertheless substantial movements in the opposite direction".

c. Distribution of distances moved

A universal feature of migration is that most moves are relatively short indicating a strong inverse relationship between distance moved and volume of movers. Thus, in cities large numbers of residents transfer within the same suburb or sector and relatively few move across the city (Simmons, 1968, p.640: Johnston, 1971, p.317). It has been shown that in the Adelaide Statistical Division "there are significant systematic differences in the distances people move on changing residence" (Ward, 1975, p.200/10) and that more than half of all transfers cover less than five kilometres.

4.1.4 AVAILABILITY OF DATA

There are relatively few published analyses of internal migration patterns in Australia. One reason for this is that until 1971 there was no official collection of specific information about changes of residence of the population at large. The 1971 census was the first occasion that such data was officially collected. Until then researchers of internal migration were obliged to use indirect evidence gathered from sources originally intended for other purposes such as electoral roll transfers and electricity account changes. Since 1973 the Australian Bureau of Statistics has conducted an annual survey on internal migration.

It is fortunate that in South Australia original research was completed in the 1970s covering both non-metropolitan and metropolitan movements within the state (Hugo, 1971 and Ward, 1975). Both studies were based on data from electoral rolls. The first attempt at a comprehensive review of national patterns has been based on the 1971 census and recently published under the title "Internal Migration in Australia" (Rowland 1979). These are the base for the discussion which follows and although the statistics are now outdated the broad patterns are still worth consideration.

4·2 SCALE AND NATURE OF MIGRATION

4.2.1. AUSTRALIAN PATTERNS AND SOME SOUTH AUSTRALIAN EXAMPLES

There appears to be a contradiction in Australia between the large total amount of population movement since the second World War both into and within the nation and the apparent lack of change in the geographic patterns of settlement. Rowland (1979, p1) suggests therefore: "internal migration in contemporary Australia is concerned more with maintaining the settlement pattern than with modifying it". Nevertheless, it is true that the considerable overall growth in the Australian population during this period has not been uniformly shared amongst or spread over the existing settled areas.

Some observations which arise from this situation are offered under the following headings: (a) International migration, (b) metropolitan dominance, (c) suburbanisation of the urban-rural fringe, (d) rural areas seem near equilibrium, (e) selectivity of migration streams, (f) stability of most areas.

(a) International Migration

The most rapidly expanding regions have relied heavily upon international migration to meet increased labour needs (Rowland, 1979, p4).

- Whyalla is an obvious example in South Australia.
- Much of metropolitan Adelaide's growth has come from this source: 28% of Adelaide's population in 1976 was foreign-born and constituted 85% of South Australia's overseas born population although only 72% of the total population lived in Adelaide.

Foreign born persons in South Australia number about 300 000, representing one-in-every-four in the population. They come from a considerable diversity of nations and thus include many different languages and ethnic backgrounds. Some of these groups form distinct geographic concentrations within the Adelaide metropolitan area.

With changes in the world economic climate during the last decade the intake of migrants into Australia from Europe has fallen off to near zero. More recently and since the Vietnam War the flow of refugees from South East Asia has been rising. In taking a share of these South Australia has expanded a cultural element previously almost unknown: an ethnic group differing more than any other except the Australian aboriginal, from the prevailing north-west European inherited religious - social - political system.

(b) Metropolitan Dominance

Metropolitan dominance at the state level has been reinforced and so remains the outstanding feature of the Australian settlement pattern. This, Rowland states (1974, p4) is basic to an understanding of the nature of internal migration flows and the absence of major changes in the regional distribution of population.

. Adelaide's share of the total South Australian population has risen from 59.2% in 1947 to 71% in 1971 (Hugo 1974, p82) and 72% in 1976.

(c) Suburbanisation of the urban-rural fringe

Australian capital cities have shown a strong tendency as part of the process of suburbanisation to spill out into the rural periphery in the last decade. This movement has been "generated not only by the pressures of increasing population size, but also by references for less urbanised or more scenic environments" (Rowland, 1979, p3).

. The Outer Adelaide Statistical Division has remained the fastest growing division in the state since 1971 with a rate still exceeding 4% per annum compared with a current state average of about 1% per annum.

(d) Rural areas near equilibrium

Despite the old stereotype of massive outward migrations from country areas "the absolute number of rural dwellers was fairly static during the 1950s and 1960s and the 1971 census shows that counterstreams to outward migration were well developed" (Rowland, 1979, p5).

. Though Hugo's work shows broad agreement with this in South Australia it is noteworthy that between 1961 and 1966 the rural sections of the state constituted "the main source of intrastate net migration gains experienced by the urban areas" (Hugo, 1974, p89).

(e) Selectivity of migration streams

Migrant streams are rarely "representative cross-sections of the resident population in their districts of origin and destinations"

(Hugo, 1974, p88). It is inevitable, therefore, that the demographic and social structure of areas will undergo change in the face of any migratory flows.

- It has been pointed out already (See 4.1.1.) that South Australia's rural population between 1961 and 1966 experienced net migration losses of certain groups, resulting in both increasing sex imbalance and general ageing in comparison with urban areas (Hugo, 1974, p91).

(f) Stability of most areas

Stability of the residential population's social composition is typical of large parts of urban areas, despite high rates of population turnover (Simmons, 1968, p649).

- In Adelaide, for example, such well known suburbs as Thebarton and Mitcham both have high rates of residential change (See Ward, 1975, p134) and yet maintain their differing characteristics despite their changing residential membership.

4.2.2. INTERSTATE MOVEMENT FROM SOUTH AUSTRALIA

Throughout the 1970s (with the exception of one year only, 1977) South Australia has experienced an annual net loss of population through interstate migration usually ranging between one and three thousand. However in its latest survey the Australian Bureau of Statistics (A.B.S. Cat No. 3408.0) has revealed that in the twelve months ended 30 June 1980 South Australia'a net loss by internal migration was 5 800 while Adelaide itself lost 6 800. Despite these losses the population has maintained a low rate of overall growth because of natural increase and international migration.

The A.B.S. survey showed that in Australia as a whole 186 000 changed state of residence. Significantly almost 60 per cent of the movers were aged 20 to 34 whereas only 24 per cent of the population is in this age bracket. During the same period South Australia suffered a net loss of 1 700 aged 15 to 19 and another 1 800 between ages 20 and 25. This almost certainly represented an exportation of some vocational skills which had been acquired within the state. Given that South Australia's unemployment rate for young people is the highest in mainland Australia (See section 2.3) the movement is not a surprising reaction. This outflow is not likely to be reversed until the local employment situation changes. In the meantime the volume of local demand for vocational training is lessened by the loss of some young people and the possibility increased of future local shortages of skilled workers when economic recovery occurs. (It would be prudent therefore to keep local training levels as high as possible.)

4.2.3. SOUTH AUSTRALIA INTERNAL POPULATION CHANGE

(a) Population growth

Superficially it is easy to demonstrate that regional shifts are taking place in South Australia's population distribution (See Table 11). The table shows that in the second period (1976-79) there has been a general fall-off in the rate of growth compared with the first period (1971-76) but that the decreases have been unevenly distributed geographically. The greatest reductions occurred in Northern (absolute decline) and Adelaide. The only areas to increase their annual rates of growth were the Outer Adelaide Statistical Division and Eyre. Five of the six non-metropolitan divisions actually improved their relative growth shares so that in the 1976-79 period growth rates were above the state figure whereas they were below in four of them in the 1971-76 period.

The above changes resulted from a mixture of all the demographic forces-births, deaths and migration.

(b) Non-metropolitan (internal) migration

The movement patterns of 1961 to 1966 revealed by Hugo, probably remain generally similar at present. The accompanying maps illustrate that large interchanges of population occur with flows and counterflows connecting many areas of the state. Although

TABLE 11

SOUTH AUSTRALIA : RATES OF POPULATION CHANGE IN STATISTICAL DIVISIONS 1971 TO 1979

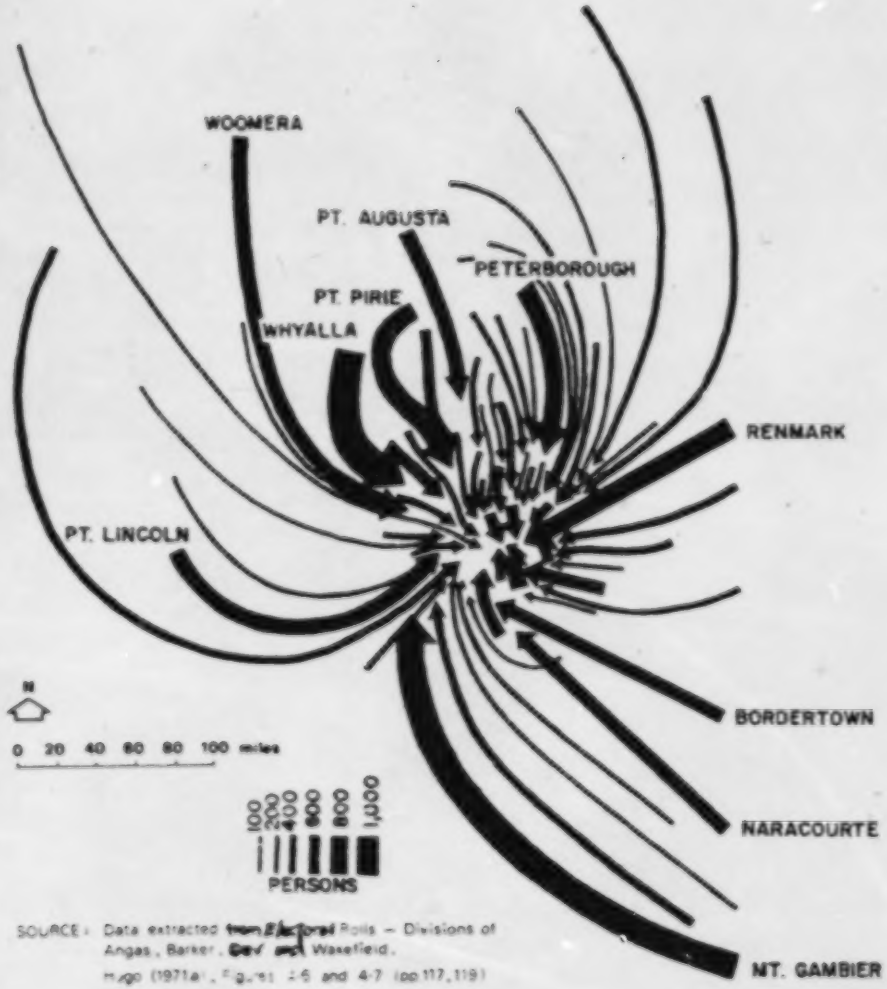
STATISTICAL DIVISION	INTERCENSAL 1971 - 1976 %	ANNUAL MEAN %	ESTIMATES 1976 - 1979 %	ANNUAL MEAN %
SOUTH AUSTRALIA	+ 15.38	3.8	+ 2.8	0.9
ADELAIDE	+ 16.73	3.4	+ 2.4	- 0.8
OUTER ADELAIDE	+ 17.90	3.6	+13.8	4.4
YORKE AND LOWER NORTH	+ 9.12	1.8	+ 4.6	1.5
MURRAY LANDS	+ 11.29	2.3	+ 3.9	1.3
SOUTH EAST	+ 11.25	2.3	+ 3.6	1.2
EYRE	+ 10.81	2.2	+ 7.1	2.3
NORTHERN	+ 11.24	2.2	- 3.5	- 1.2

SOURCE : Australian Bureau of Statistics, various publications.
(a) Popn. & Dwellings in Local Govt. Areas (Preliminary), 1976 Census
(b) Cat. No. 3201.4 (Pop & Dwellings in Local Govt. Areas), 1977, 1978, 1979.

the largest volumes involve metropolitan Adelaide (See Figures 3(a) and 3(b))a complex network of smaller flows occurs throughout the state (See Figure 4).

FIGURE 3(a)

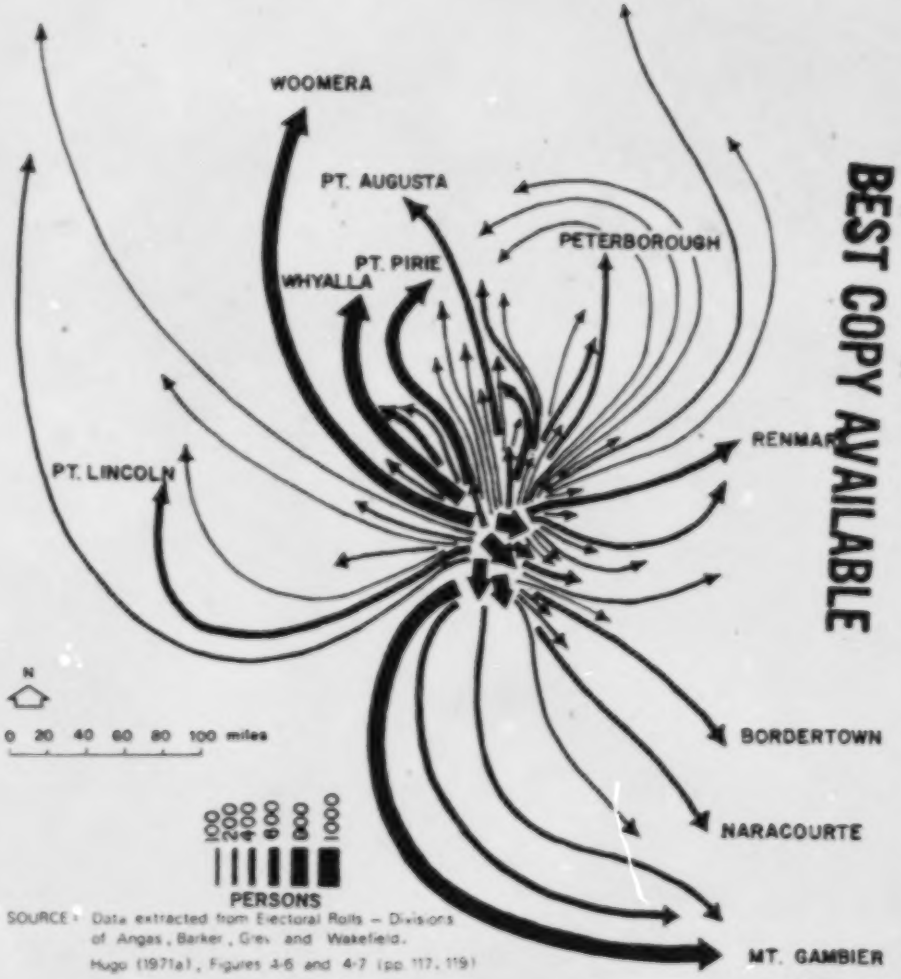
VOTER MOVEMENTS TO METROPOLITAN ADELAIDE FROM NON-METROPOLITAN COMMONWEALTH ELECTORAL SUBDIVISIONS 1961 – 1966



SOURCE: Data extracted from Electoral Rolls – Divisions of Angas, Barker, Grey and Wakefield.
Hugo (1971a), Figures 4-6 and 4-7 (pp 117, 119)

FIGURE 3(b)

VOTER MOVEMENTS FROM METROPOLITAN ADELAIDE TO NON-METROPOLITAN COMMONWEALTH ELECTORAL SUBDIVISIONS 1961 – 1966



SOURCE: Data extracted from Electoral Rolls – Divisions of Angas, Barker, Grey and Wakefield.
Hugo (1971a), Figures 4-6 and 4-7 (pp 117, 119)

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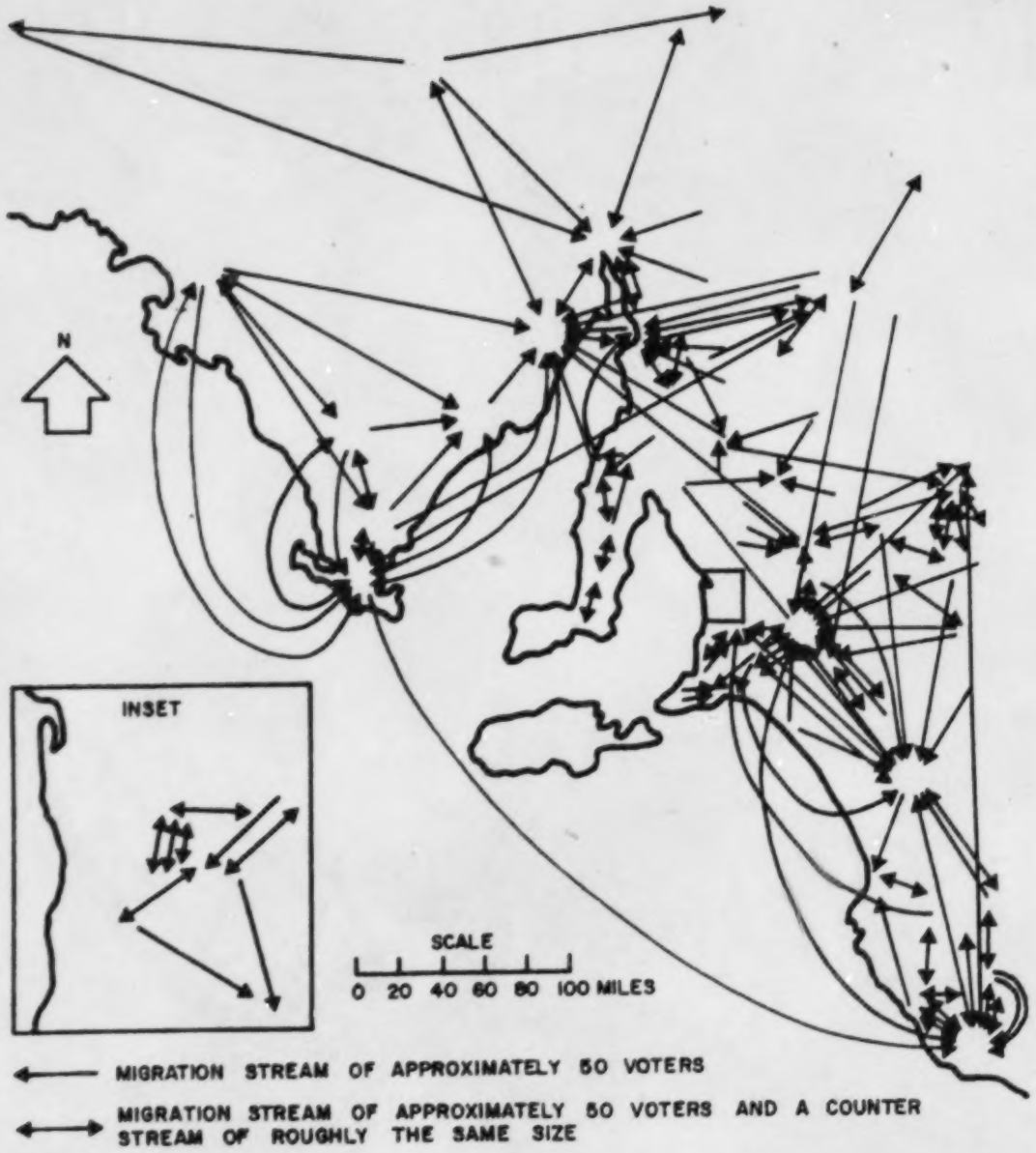
FIGURE 4

SOUTH AUSTRALIA: MAJOR VOTER MOVEMENTS BETWEEN THE STATES' NON-METROPOLITAN COMMONWEALTH ELECTORAL SUBDIVISIONS


N
INSET
SCALE
0 20 40 60 80 100 MILES
MIGRATION STREAM OF APPROXIMATELY 50 VOTERS
MIGRATION STREAM OF APPROXIMATELY 50 VOTERS AND A COUNTER STREAM OF ROUGHLY THE SAME SIZE

SOURCE: Data extracted from Subdivisional Rolls, Commonwealth Electoral Divisions of Angas, Wakefield, Barker and Grey. Hugo (1971a), p. 121 (Fig 4-8)

It has been pointed out already that migration involving rural areas is selective of age and sex: in some cases there is a net loss of school leaving age groups and young adult females and in other cases a state of sex imbalance and general ageing of the population is maintained (Hugo 1974, p91).

(c) Intra-urban migration

Perhaps not surprisingly the situation within the metropolitan area* is more complex than in the rest of the state.

A disproportionately large part of the international migration to the state continues to accumulate in the metropolitan area thus helping to maintain its rate of growth (See Table 11).

There are important geographic variations within the metropolitan area itself in the way population characteristics are distributed. For example, there is a distinct tendency for a concentric zonation of age with the oldest in inner suburbs and the youngest towards the urban periphery. Such patterns are reinforced or modified by intra-urban migration. Despite a recent rate of annual increase of less than one per cent, some parts of the metropolitan area are increasing at rates between five and fifteen per cent, whilst others are decreasing by as much as two or three per cent per annum. Population movement is the cause of most of the change.

Some parts of the urban area are in or near population equilibrium. They are the fully built-up areas where the high growth of the 1950s and 1960s was concentrated: namely, Elizabeth, Mitcham, Marion, Port Adelaide and Woodville. The other inner and some middle local government areas have decreasing populations: for example Enfield, Glenelg, Thebarton and West Torrens. The areas of high growth are the outer suburbs with space for plenty of new housing: for example Noarlunga, Meadows, Tea Tree Gully, Stirling and Salisbury local government areas. It is noteworthy that of the seven statistical divisions in South Australia that are known as Outer Adelaide has maintained the highest rate of growth since 1971. This contains much of the "urban-rural fringe" and is undergoing the first stages of suburbanization as metropolitan populations selectively relocate there.

The latest survey (A.B.S. Cat No. 3408.0) shows that in the year ended 30 June 1980 more than 85 000 (or 12 per cent) people over 15 years of age changed residence within the Adelaide Statistical Division. According to Ward (1975, p131) the annual rate of movement in 1970-71 was about 15 per cent but that it varied considerably throughout the urban area (Ward 1975, p134) with a tendency to be highest in the inner city and near suburbs, and lowest in newer suburbs. (See Figure 5).

Flows and counter-flows have been identified within the Adelaide area and certain patterns can be identified (See Figures 6 & 7)

---

* "metropolitan area" in this paper refers to the official territory defined by the Australian Bureau of Statistics as the "Adelaide Statistical Division".

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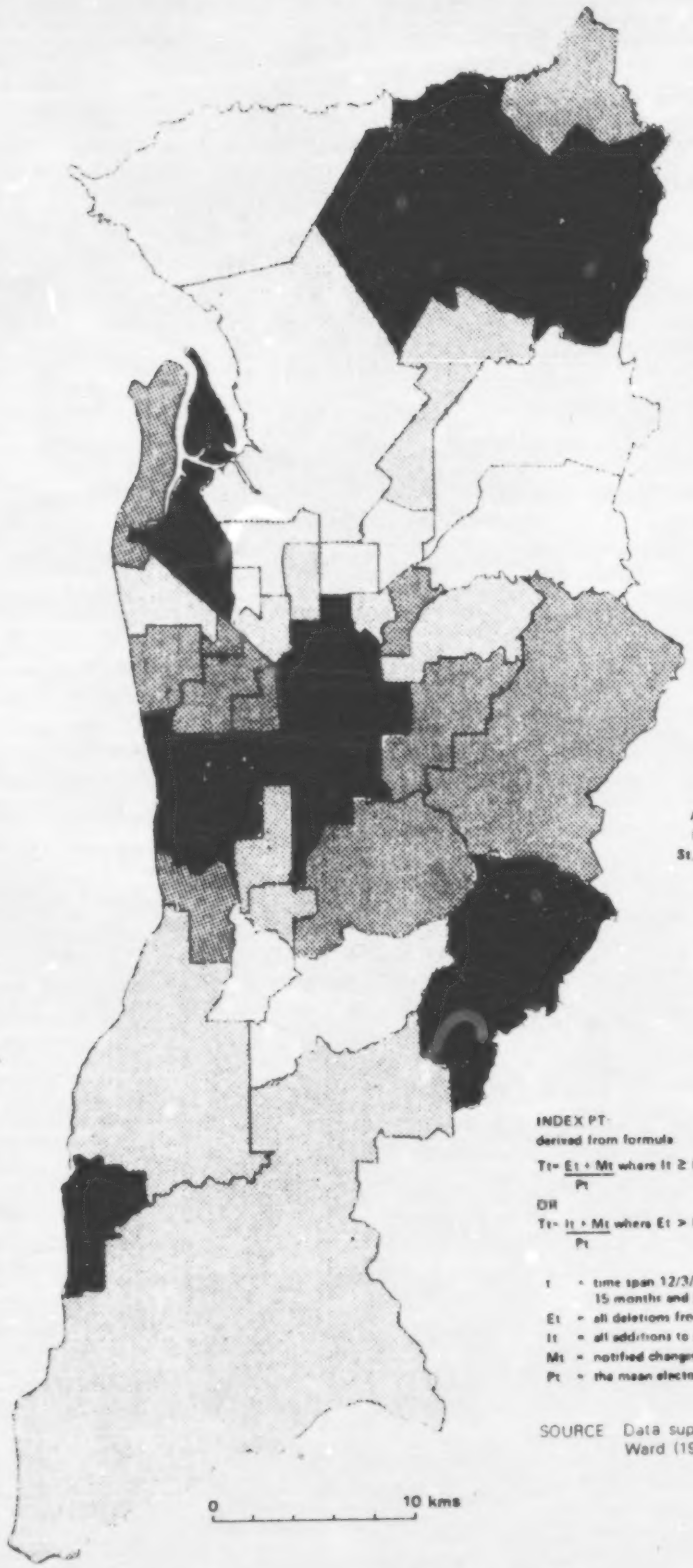
FIGURE 5 (INDEX PT) PERCENTAGE ANNUAL POPULATION TURNOVER OF ELECTORS 1970 - 1971



SOURCE Data supplied State Electoral Dept. Adelaide
Ward (1975) - Figure 4·4 (facing p.134)

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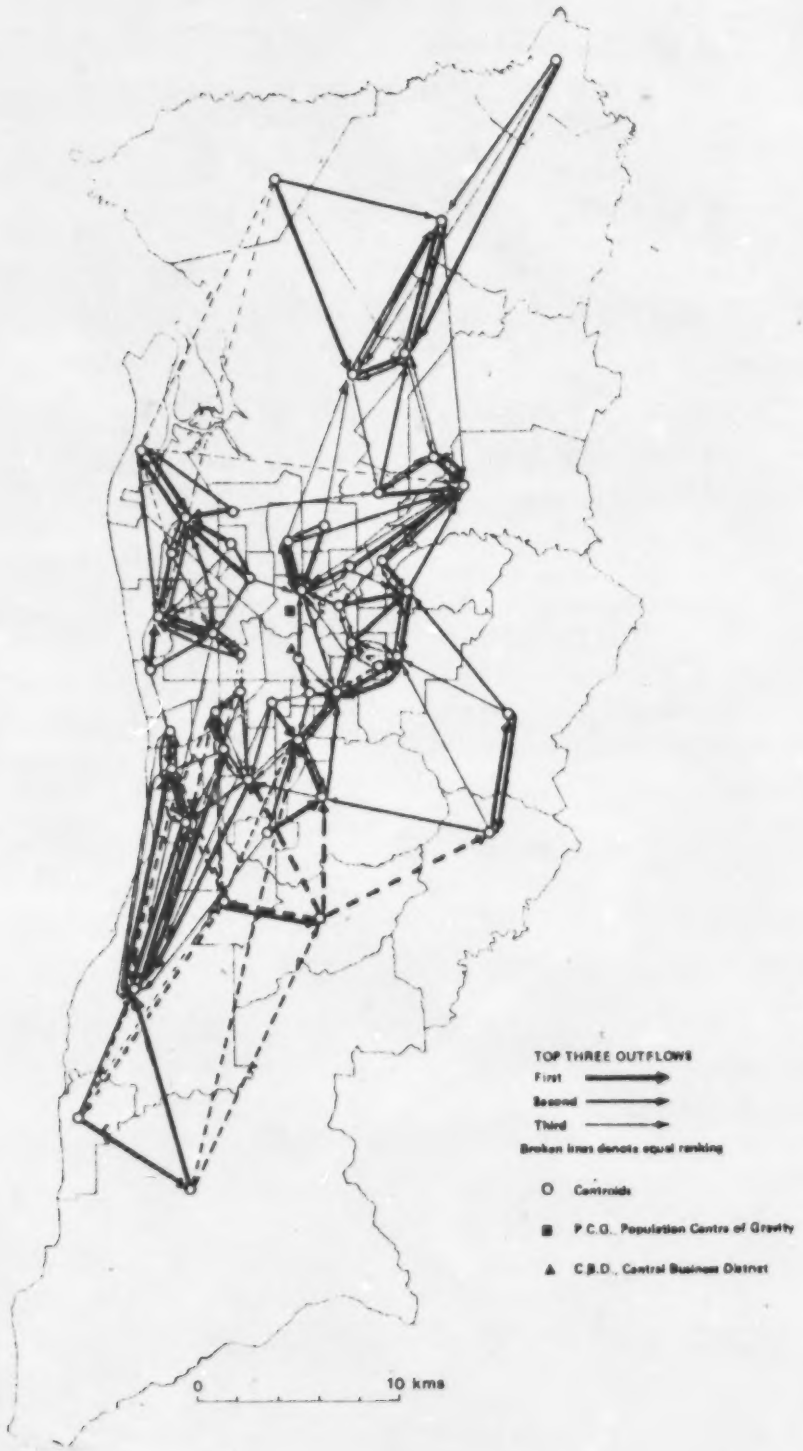
FIGURE 6

THREE LARGEST FLOWS FROM EACH ELECTORAL SUBDIVISION
IN THE ADELAIDE STATISTICAL DIVISION

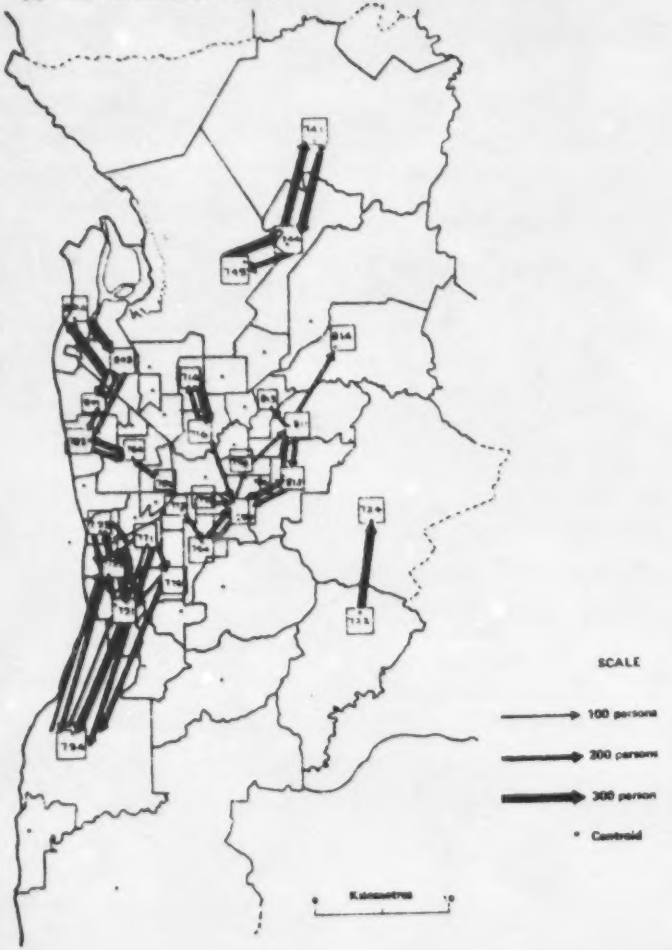


SOURCE: Basic data supplied by State Electoral Dept. Adelaide.
Ward (1975) - Figure 5-1 (facing p.163)

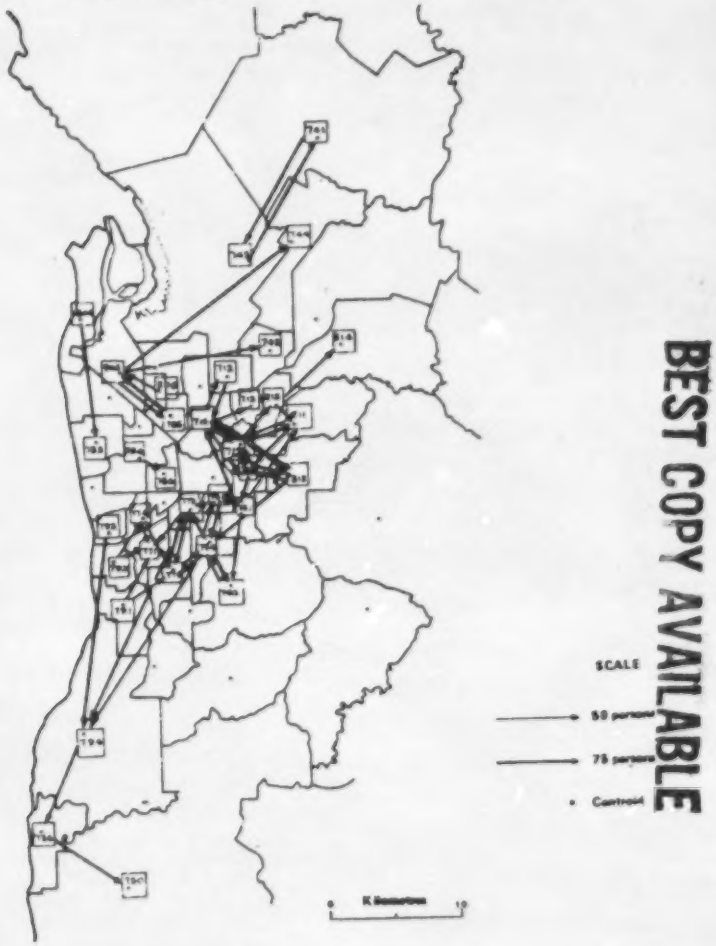
FIGURE 7

THE LARGEST 110 INTRA-URBAN FLOWS OF ELECTORS BETWEEN SUBDIVISIONS, ADELAIDE STATISTICAL DIVISION

(a) THE 44 LARGEST FLOWS



(b) THE NEXT 66 LARGEST FLOWS



SOURCE: Data for period 12 March 1970 to 11 June 1971 supplied by State Electoral Dept. Adelaide. Ward (1975) - Figure 5-3 (facing p.174)

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There are tendencies for people who move house within the metropolitan area to do so over short distances, within the same sector and thus within familiar territory. This often means that people retain many of their social and business links within the same geographic area. The information presented in these maps has been used to identify geographic "communities of interest" of a certain scale within the metropolitan area (See D.F.E., 1977 - "Community Colleges").

It suggests that many of the residents in new outer suburbs will predictably come from neighbouring parts of the same sector.

Rates of net migration in the metropolitan area also vary from place to place (See Figure 8) ranging from decline in most of the inner and middle suburbs to increases in the "new" suburbs, especially Tea Tree Gully in the north east and Noarlunga in the south west. This distribution is in marked contrast to that of rates of turnover already mentioned.

4·3 IMPLICATIONS FOR T.A.F.E. IN SOUTH AUSTRALIA

Implications are considered under the same headings as the earlier discussion on different types of migration.

4.3.1 INTERNATIONAL MIGRATION

Although the numbers of foreign-born taking up residence in South Australia have declined markedly unmet educational need within the TAFE sector is considerable. Firstly, many of those who took up permanent residence years ago still have special needs, especially foreign speaking women and those requiring vocational retraining. Secondly, the shift to Asia as a major source of immigrants introduces new language and social problems requiring new staff, and perhaps changed techniques and class locations. The fact that four fifths of the overseas born reside in the metropolitan area makes it difficult to service the scattered remainder, although there are local ethnic concentrations in such country areas as the Riverland, Whyalla and Port Augusta. Programmes must somehow be available to these people many of whom have added isolation to their inevitable problems of adjustment.

4.3.2 INTERNAL-INTERSTATE

In recent years South Australia has been losing population to other states. The flow has been strongly selective of those aged 20 to 35 and particularly those 20 to 24. This seems inevitable at a time when this state has near the highest unemployment rate in the country and is suffering economic recession. As a consequence the state is losing a considerable part of its training investment as those with saleable skills take them elsewhere because of the current local surplus. These losses make it the more certain that when economic recovery occurs there will be local shortages of certain skilled members.

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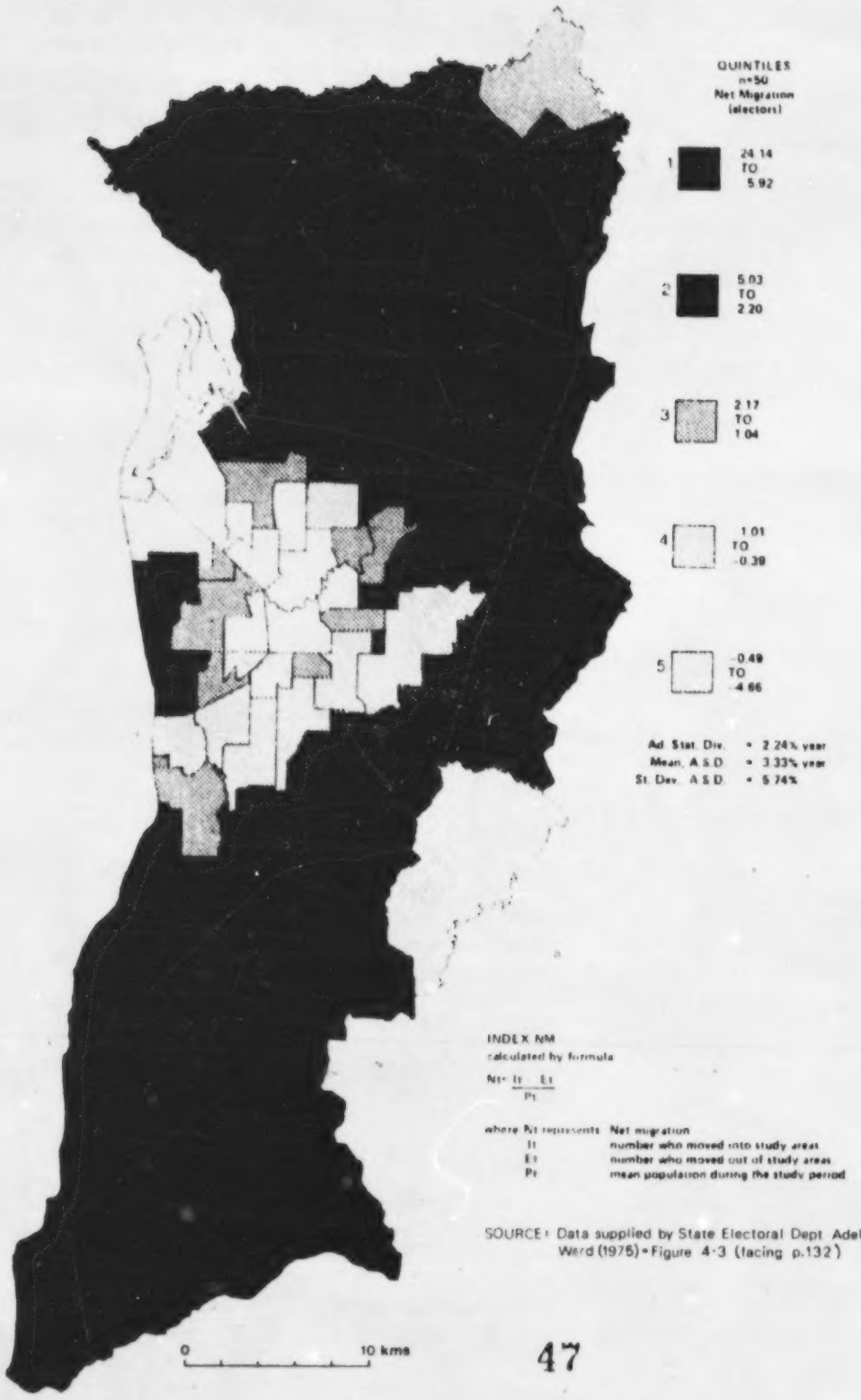
FIGURE 8

(INDEX NM) PERCENTAGE ANNUAL NET MIGRATION OF ELECTORS 1970 - 1971



INDEX NM
calculated by formula

$$\frac{Nt = It - Et}{Pt}$$

where Nt represents Net migration
It number who moved into study areas
Et number who moved out of study areas
Pt mean population during the study period

SOURCE: Data supplied by State Electoral Dept Adelaide
Ward (1975) - Figure 4·3 (facing p.132)

Insufficient data on the workforce exists to identify with much detail the areas of potential shortage and likely shifts in vocational training needs. Ideally TAFE should be able to take steps to help soften the impact of sudden changes in levels of demand for skilled workers. This is only possible if more information is available on future workforce requirements and if government policy provides for closer liaison between labour, industry and training authorities such as TAFE.

4.3.3 INTERNAL - INTRASTATE NON-METROPOLITAN

As pointed out elsewhere the major effect of most residential movement is merely to maintain the existing settlement pattern at somewhere near equilibrium. During the last decade it appears that the overall rural decline has been arrested. The larger country towns in South Australia are growing modestly but the age-sex imbalance described by Hugo persists.

TAFE in non-metropolitan areas can do more to alleviate the locational and educational disadvantages of the population. In some areas apprentices obliged to attend block release training in the city may be better served by provision nearer home. In non-metropolitan areas much higher proportions of females take TAFE courses than in the city emphasising the high importance of the opportunities offered. It is likely that more could be done to take account of country needs in all aspects - vocational and enrichment.

The age group 20-25 not only shows the highest propensity to change place of residence but also a high propensity to enrol in TAFE courses. (See Figs. 1 and 2.) This suggests that probably many students suffer broken or interrupted courses through transfer. Since D.F.E. has a statewide network of institutions, including the Open College which offers "distance education", it is probable that much more could be done to alleviate educational hardship. Students could be better informed of the network opportunities and also more administrative effort could be made to ensure easy transfer between similar courses at different institutions. The problem is even worse nationally. Again, considerable numbers of students are regularly inconvenienced by a system unable to accommodate their changed personal circumstances.

4.3.4 INTERNAL - INTRASTATE METROPOLITAN

Although there is a high general rate of population turnover within the metropolitan area the highest rates occur in the older inner suburbs and city proper, and lowest rates in the newest suburbs (see Fig. 5).

The net migration patterns which result show population decrease and aging populations in the middle suburbs and young rapidly increasing populations in the new suburbs - especially Noarlunga in the south west and Tea Tree Gully in the north east.

Less obvious from the statistics are the older areas undergoing rejuvenation through younger populations replacing older ones: areas like Unley, Malvern, St. Peters and Prospect.

4.3.5 IMPLICATIONS FOR TAFE

(1) Major new suburban areas must have TAFE colleges when local potential reaches suitable levels. Appropriate criteria have been outlined already (see D.F.E., 1977 "Community Colleges"). The obvious areas are Noarlunga, Tea Tree Gully and Salisbury. In the distant future the Munno Para area (between Gawler and Elizabeth) is likely to require a separate TAFE college.

(2) In the inner-middle suburban areas of fluctuating and changing population, college staff need to be sensitive to that change in order that college programme offerings evolve responsively. The colleges situated in these areas all have in addition to their general programmes serving their immediate communities, some specialist elements serving a wider population.

(3) The Outer Adelaide Statistical Division is an arc about twenty miles wide wrapping completely around the perimeter of the Adelaide Statistical Division. Though rural in character it is truly a "zone in transition" becoming increasing by suburbanised as considerable numbers of city-based people move there but retain their urban links.

There are implications for the three colleges located in this zone - Gawler, Adelaide Hills and South Coast. The institutions are small to moderate in size and can expect growing demands of a mixed kind from a population becoming younger, and interested in learning more about part-time rural activity for enrichment or additional small business. Only moderate additional resources will be needed because the areas have only small population bases though they are growing strongly: major vocational needs will continue to be met by the large metropolitan specialist colleges.

(4) Some country towns are undergoing changes in the aggregate population characteristics in the face of high unemployment and retirement patterns. Many are characterized by high unemployment rates, large and growing percentages of retired people and growth in the hobby farm population. These represent local shifts in the nature of the potential market for TAFE courses.

5. IMMIGRANTS IN SOUTH AUSTRALIA

5.1 PRESENT NUMBERS, LENGTH OF RESIDENCE AND PLACES OF ORIGIN

5.1.1. INTRODUCTION

As indicated in Chapter 4, a considerable part of the spectacular population growth in Australia since World War II has been due to immigration* from a wide range of overseas countries. The thirty years of this deliberate programme have seen fluctuations in the annual rates of in-migration and in the particular countries of origin. While it may be trite to observe that great cultural diversity has resulted from this intake of new population, it is much less apparent that enormous personal readjustment has been (and continues to be) necessary for the individual migrants. English still remains by far the dominant language in South Australia, being spoken by about 87 per cent of people over five years of age (see Table 17). This has obliged about one quarter of a million other people, those from non-English speaking backgrounds (see Table 15), to grapple with the problems of social, cultural and economic readjustment is South Australia through the difficult medium of a foreign language.

The following tables and analyses seek to explore the numbers and composition of this important element of the state's population in order that its special claims on TAFE might be better understood.

5.1.2. VARIATIONS IN THE FLOW OF MIGRANTS

By the time of the 1976 census almost one quarter (or almost 300 000) of all South Australians had been born overseas (see Table 12).

TABLE 12 **SOUTH AUSTRALIA: COMPARISON OF NUMBERS OF AUSTRALIAN AND OVERSEAS BORN IN THE TOTAL POPULATION**

PLACE OF BIRTH	MALES		FEMALES		TOTAL PERSONS	
	NO.	PERCENT	NO.	PERCENT	NO.	PERCENT
AUSTRALIA	468 112	37.6	483 425	38.8	951 537	76.4
OVERSEAS	152 051	12.2	141 172	11.3	293 222	23.6
TOTAL POPULATION	620 163	49.8	624 597	50.2	1 244 760	100.0

SOURCE: ABS Census, June 1976 (Table 6)

---

* Immigration: In academic studies of migration, problems arise from the special usage of words with common meanings. For the sake of increased clarity it is now accepted practice in this field to use "in-migration" and "out-migration" instead of "immigration" and "emigration" respectively.

TABLE 13 SOUTH AUSTRALIA : AUSTRALIAN BORN POPULATION WITH ONE OR BOTH PARENTS BORN OVERSEAS

PLACE OF BIRTH OF PARENTS	MALES		FEMALES		TOTAL PERSONS	
	NO.	PERCENT	NO.	PERCENT	NO.	PERCENT
A. BOTH PARENTS BORN IN AUSTRALIA	349 750	36.8	362 699	38.1	712 449	74.9
B. BOTH PARENTS BORN OVERSEAS	56 555	5.9	55 776	5.9	112 331	11.8
C. ONE PARENT BORN OVERSEAS	61 807	6.5	64 950	6.8	126 757	13.3
TOTAL AUSTRALIAN BORN	468 112	49.2	483 425	50.8	951 537	100.0

SOURCE: ABS Census, June 1976 (Table 8)

Although just under one million of the state's residents were born in Australia, about a quarter of these had at least one parent who was born overseas (see Table 13). In total, therefore, about half a million of the state's population have direct family and personal links with the migration programme.

TABLE 14 SOUTH AUSTRALIA : PERIOD OF RESIDENCE IN AUSTRALIA OF PERSONS BORN OVERSEAS

PERIOD OF RESIDENCE	MALES	FEMALES	PERSONS/NO.	PERSONS/PERCENT	
UNDER 1 YEAR	1 935	2 024	3 959	1.4	
1 AND UNDER 2 YEARS	2 918	3 021	5 939	2.0	
2 AND UNDER 3 YEARS	3 521	3 442	6 962	2.4	10.7
3 AND UNDER 4 YEARS	3 466	3 615	7 082	2.4	
4 AND UNDER 5 YEARS	3 744	3 534	7 278	2.5	
5 AND UNDER 10 YEARS	21 467	20 545	42 012	14.5	
10 AND UNDER 15 YEARS	19 121	18 606	37 727	13.0	
15 AND UNDER 25 YEARS	26 877	24 356	51 233	17.7	
25 YEARS AND OVER	15 912	12 532	28 444	9.8	
NOT STATED	51 255	48 059	99 314	34.3	
TOTAL RESIDENTS	150 214	139 736	289 950	100.0	
VISITORS	1 835	1 436	3 271	1.1	
TOTAL OVERSEAS BORN	152 050	141 172	293 221	100.0	

SOURCE: ABS Census, June 1976 (Table 11)

5.1.3. LENGTH OF RESIDENCE

The intensity of the migration programme has varied from time to time and consequently there are considerable differences in the numbers of overseas born tabulated for various periods of residence in Australia.

Table 14 shows that the peak intakes occurred in the late 1960's and early 1970's (5 to 10 years before 1976) and that between half and three quarters of all the overseas born residents have been in Australia more than 5 years. Annual intakes have tapered off considerably since the early 1970's. Although this suggests a reduction in the number of new migrants with problems, such a conclusion does not take account of the changing nature of the migrant intake.

It might be expected that migrants from non-English speaking countries would have greater problems. Table 15 sets out estimates of the maximum and minimum numbers of South Australian residents regardless of place of birth who have at least one parent born in a non-English speaking country. In 1976 at least a quarter of a million persons were in this category with somewhat more than half of these being born overseas. It is expected that the migrants with greatest adjustment problems are likely to be from this group.

TABLE 15 SOUTH AUSTRALIA : MAXIMUM AND MINIMUM ESTIMATED NUMBER OF PERSONS BORN IN AUSTRALIA OR BORN OVERSEAS HAVING ONE OR BOTH PARENTS FROM A NON-ENGLISH SPEAKING COUNTRY

PLACE OF BIRTH		MALES		FEMALES		TOTAL PERSONS	
		NO.	PERCENT	NO.	PERCENT	NO.	PERCENT
AUSTRALIA	maximum	67 624	24.3	66 543	23.9	134 167	48.3
	minimum	54 888	22.3	52 743	21.4	107 631	43.7
OVERSEAS	maximum	76 583	27.6	67 171	24.2	143 754	51.7
	minimum	74 500	20.2	64 322	26.1	138 822	56.3
TOTAL WITH AT LEAST ONE PARENT WITH NON-ENGLISH SPEAKING ORIGIN	maximum	144 209	51.9	133 714	48.1	277 921	100.0
	minimum	129 388	52.5	117 065	47.5	246 453	100.0

SOURCE: ABS Census, June 1976 (extracted from Tables 8 and 9)

5.1.4. LANGUAGES

The 1976 census attempted to collect information on languages spoken by all respondents. This revealed that in South Australia there were more than fourteen thousand persons over 5 years old with no English - 55 per cent of these were women and about 84 per cent of the total were born overseas (see Table 16).

The groups with limited exposure to English represent the central focus of the programmes operated by the Department of Further Education's

TABLE 16 SOUTH AUSTRALIA : RESIDENTS AGED 5 YEARS AND OVER WITH NO ENGLISH LANGUAGE

PLACE OF BIRTH	MALES		FEMALES		TOTAL PERSONS	
	NO.	PERCENT	NO.	PERCENT	NO.	PERCENT
AUSTRALIA	1 159	8.1	1 094	7.6	2 253	15.7
OVERSEAS	5 346	37.2	6 778	47.1	12 124	84.3
TOTAL AGED 5 YEARS AND OVER WITH NO ENGLISH	6 505	45.2	7 872	54.8	14 377	100.0

SOURCE: ABS Census, June 1576 (Table 7)

Language and Migrant Education Centre. However, there are in South Australia almost 170 000 persons over 5 years of age who speak languages other than English. This number is spread unevenly over more than twenty different languages, and it may be presumed that many of these people would benefit from either assistance in improved English or assistance in enhancing proficiency in a non-English language and culture (probably from the

TABLE 17 SOUTH AUSTRALIA : LANGUAGES SPOKEN BY PERSONS OVER 5 YEARS OF AGE

LANGUAGE (IN RANK ORDER)	NO. OF SPEAKERS	PERCENT OF SPEAKERS	PERCENT OF NON-ENGLISH
1 ENGLISH	1 093 134	86.81	-
2 ITALIAN	51 384	4.08	30.94
3 GREEK	27 001	2.14	16.26
4 GERMAN	26 074	2.07	15.70
5 POLISH	9 195	0.73	5.54
6 DUTCH	7 667	0.61	4.62
7 SLOVENE	5 175	0.41	3.12
8 FRENCH	5 029	0.40	3.03
9 UKRANIAN	3 176	0.25	1.91
10 SERBO-CROAT	2 409	0.19	1.45
11 ABORIGINAL LANGUAGE	2 144	0.17	1.29
12 SPANISH	2 007	0.16	1.21
13 HUNGARIAN	1 895	0.15	1.14
14 MALTESE	1 301	0.10	0.78
15 CHINESE	997	0.08	0.60
16 ARABIC	945	0.08	0.57
17 RUSSIAN	696	0.06	0.42
18 MACEDONIAN	694	0.06	0.42
19 CZECH	686	0.05	0.41
20 PORTUGESE	130	0.01	0.08
21 TURKISH	106	0.01	0.06
22 OTHER	7 280	0.58	4.38
23 OTHER LANGUAGE N.E.I.	10 096	0.80	6.08
TOTAL LANGUAGES SPOKEN	1 259 221	100.0	100.0(166 087)

SOURCE: ABS Census, June 1976 (Special cross tabulation)

place of birth), or both. (The question arises whether the present centralised single base is the best organisation for servicing these diverse needs. The issue is not debated in this paper.)

The twenty main non-English languages are listed in able 17 (along with English) showing the number of speakers in each language and its share of the population.

Table 17 shows that two languages alone (Italian and Greek) account for almost half of the foreign speakers and another quarter are included in five other languages (German, Polish, Dutch, Slovene and French). The remaining quarter are scattered over at least fifteen languages. (Australian Aboriginal languages have two thousand adherents in South Australia, which represents only 1.3 per cent of the non-English speakers in the State. It might be held that the amount of educational assistance provided for various groups should depend on the volume of demand and/or the size of the particular ethnic group. The special effort, however, to involve the Aboriginal peoples in TAFE - the subject of another Occasional Paper - is an example of characteristic discrimination in favour of the particularly disadvantaged.)

TABLE 18 — **SOUTH AUSTRALIA : COMPARATIVE AGE STRUCTURES OF POPULATIONS OVER 5 YEARS OF AGE SPEAKING VARIOUS LANGUAGES**

LANGUAGE GROUP (IN RANK ORDER)	NUMBER OF SPEAKERS	AGE GROUPS (PERCENT)							
		5 - 9	10 - 14	15 - 24	25 - 34	35 - 44	45 - 54	55 - 64	65+
TOTAL S.A. POPULATION 5+ YEARS no.	1 143 486	112 246	116 549	220 686	186 610	136 875	143 273	113 864	113 387
%	100%	9.82	10.19	19.30	16.32	11.97	12.53	9.96	9.92
1 ENGLISH	1 093 134	10.00	10.46	19.64	16.39	11.96	12.49	9.74	9.32
2 ITALIAN	51 384	9.59	11.90	18.29	14.38	18.61	15.71	6.58	4.95
3 GREEK	27 001	12.96	12.73	17.91	15.84	19.85	12.63	4.53	3.54
4 GERMAN	26 074	3.14	9.10	14.03	12.31	15.14	23.63	13.68	8.97
5 POLISH	9 195	2.32	4.11	13.89	15.52	6.38	28.97	20.80	8.00
6 DUTCH	7 667	3.04	4.90	15.00	22.72	15.91	18.29	15.03	5.11
7 SLOVENE	5 175	3.42	5.41	13.14	19.85	27.09	17.35	9.10	4.62
8 FRENCH	5 029	2.74	19.43	26.76	16.42	11.45	12.07	6.56	4.55
9 UKRANIAN	3 176	3.84	4.00	14.70	16.88	4.75	28.94	17.00	9.95
10 SERBO-CROAT	2 409	12.62	10.05	14.61	17.89	22.71	11.83	6.93	3.36
11 ABORIGINAL	2 144	13.48	11.94	21.83	17.49	15.35	8.82	5.50	5.60
12 SPANISH	2 007	9.92	10.21	16.59	23.12	20.93	11.91	5.43	1.84
13 HUNGARIAN	1 895	0.11	0.21	4.75	12.61	22.22	30.13	17.94	11.98
14 MALTESE	1 301	1.08	2.15	15.14	27.59	22.14	16.06	9.84	6.00
15 CHINESE	997	4.81	4.71	27.98	34.60	14.64	7.42	3.81	1.91
16 ARABIC	945	7.51	7.30	19.05	26.88	14.92	13.44	5.82	5.08
17 RUSSIAN	696		1.15	0.57	1.44	8.19	28.16	26.87	33.62
18 MACEDONIAN	694	6.63	10.23	19.02	15.13	18.30	17.00	5.76	7.78
19 CZECH	686	2.92	5.25	4.66	20.99	15.74	32.36	10.93	7.14
20 PORTUGESE	130	4.62	7.69	9.23	46.92	19.23	3.85	4.62	3.08
21 TURKISH	106	8.49	7.55	7.55	20.75	19.81	1.89	24.53	9.43

SOURCE: ABS Census, June 1976 (Special cross tabulation)

5.1.5. AGE STRUCTURES OF LANGUAGE GROUPS

Another important variable in determining both the volume and nature of demand is the age structure of the population. This is set out in Table 18 for each of the main languages (including English) and for the whole State.

The following observations may be made from a perusal of the figures shown in Table 18.

(a) English speakers compared with all others:

Because almost 87 per cent of the total population speaks English the age structure of this group differs only marginally from the total population of the State: the small difference arises from the tendency of non-English speakers to be older. Therefore, for age cohorts under 35 years English has slightly higher than average proportions and slightly below average for those groups above that age, both features reflecting the relatively younger age of speakers of English.

(b) Non-English language speakers:

There are a few languages whose speakers are younger than the general pattern outlined above. These tend to have above average proportions in the under 15 years group. This suggests that these cultural groups are more vigorous and succeed in keeping their children actively involved with their language and to a limited extent probably their culture also. These groups include the Aboriginal languages and also Greek, Italian, Serbian-Croatian and Spanish. Because of their internal cohesion these groups may contain people in particular need of support to gain sufficient competency in English.

(c) Language groups with few young people:

There are many foreign language groups whose speakers are generally much above the average age. This suggests that these groups have not been renewing their language and/or culture and are failing to pass it on to their children. These groups and their main age characteristics are listed below.

- German - mainly in the over 35 years.
- Polish - heavily concentrated in the over 45 years
- Slovene - in the over 25 years
- Ukranian - bimodal: in the 25-34 years and over 45 years
- Hungarian - heavily spread across the 35+ years
- Maltese - spread from 25 to 65 years
- Russian - heavily concentrated in the over 45 years
- Czech - spread heavily between 25 and 65 years.

With assistance from organisations such as the D.F.E. these smaller language groups may be enabled to engender or sustain sufficient interest to remain locally viable; otherwise it seems likely that these ethnic groups eventually will lose both their language and culture.

5·2 CHANGING "PLACES OF ORIGIN" OF MIGRANTS TO SOUTH AUSTRALIA

From the very commencement of the post-war migration programme the chief source of migrants to South Australia has been the United Kingdom and Eire. Even now nearly 54 per cent of all overseas born persons living in South Australia came from that source. The relative importance of various countries and waxed and waned over time. This may be demonstrated in part by reference to Table 19 which shows 'period of residence' as two simple classes. If one compares for each country the two columns 'under 5 years' and '5 years and over' with the column headed 'persons' as a norm, the following facts emerge about the sources of overseas migrants for South Australia up to the 1976 census.

- U.K. and Eire remained an important source.
- In the early 1970's the intake from most European countries, such as the following, had declined relative to the whole: Italy, Germany, Greece, Netherlands, Poland, Hungary, Austria and Russia (U.S.S.R.).
- Some countries had increased their relative contributions to South Australia's intake of migrants. For example: Other Asia, New Zealand, U.S.A., Canada, Other America, Cyprus, Turkey and Lebanon, Other Africa, Other Oceania.

The population is ever dynamic and the above changes are of course reflected in changes in the language and age composition of the overseas born population. Consequential changes follow in the demand patterns for migrant and education services.

Evidence that the shifts in sources of migrants noted above at the 1976 census have continued is provided in Table 20.

Table 20 shows for the whole of Australia the percentage intake from each world region during the most recent four years. The most outstanding feature is the spectacular growth in the Asian contribution. Since 1978 it has provided the largest single regional component, almost exceeding the combined contributions from U.K. and Eire and Northern Europe - the traditional sources of Australia's immigrants. South Australia's share of the 1978-80 intake was 5 007 or only 6.2 per cent when measured by the 'state of intended residence" data collected when migrants (including refugees) first arrive. However, as few are ever landed directly in South Australia and many are "undecided" and counted for the state of disembarkation, the above numbers are a serious under-representation of the migrants who eventually settle in this State.

Using available data Table 21 suggests that for South Australia the relative importance of Asia as a source of immigrants is even greater than for Australia as a whole and is increasing. During the last four years almost 3 500 refugees are recorded as settling in South Australia; most of them have come from Indo-China.

5·3 SUMMARY AND CONCLUSIONS

Because English is overwhelmingly the dominant language in South Australia it is imperative for newcomers to be reasonably proficient to be able to

TABLE 19 SOUTH AUSTRALIA : OVERSEAS BORN POPULATION SHOWING COUNTRY OF BIRTH, PROPORTION OF AUSTRALIAN CITIZENS AND LENGTH OF RESIDENCE 1976

COUNTRY OF BIRTH (IN RANK ORDER BY SIZE)	PERSONS		AUSTRALIAN CITIZENS		PERIOD OF RESIDENCE					
			PERCENT OF GROUP		UNDER 5 YEARS		5 YEARS AND OVER		NOT STATED	
	number	percent	number	percent	number	percent	number	percent	number	percent
1 UK and EIRE	157 882	53.8	50 399	31.9	21 197	13.4	87 754	55.6	48 930	31.0
2 ITALY	31 943	10.9	19 427	60.8	1 039	3.3	18 449	57.8	12 456	39.0
3 GERMANY	15 393	5.2	11 371	73.9	771	5.0	8 867	57.6	5 756	37.4
4 GREECE	14 706	5.0	10 696	72.7	651	4.4	8 058	54.8	5 997	40.1
5 OTHER EUROPE	12 931	4.4	9 410	72.8	1 008	7.8	6 934	53.6	4 988	38.6
6 NETHERLANDS	10 741	3.7	7 558	70.4	363	3.4	6 470	60.2	3 909	36.4
7 YUGOSLAVIA	9 003	3.1	6 029	67.0	639	7.1	4 693	52.1	3 672	40.8
8 OTHER ASIA	7 953	2.7	4 366	54.9	2 597	32.7	3 188	40.1	2 168	27.3
9 POLAND	6 914	2.4	6 136	88.7	184	2.7	3 816	55.2	2 913	42.1
10 NEW ZEALAND	4 098	1.4	1 248	30.5	1 404	34.3	1 537	37.5	1 158	28.3
11 HUNGARY	2 679	0.9	2 434	90.9	90	3.4	1 372	51.2	1 218	45.5
12 U.S.A.	2 432	0.8	383	15.7	1 435	59.0	620	25.5	376	15.5
13 OTHER AFRICA	2 267	0.8	1 211	53.4	600	26.5	1 063	46.9	604	26.6
14 AUSTRIA	2 204	0.8	1 683	76.4	66	3.0	1 242	56.4	896	40.7
15 MALTA	2 155	0.7	1 092	50.7	181	8.4	1 210	56.1	765	35.5
16 CYPRUS	1 651	0.6	811	41.9	314	19.0	691	49.1	646	39.1
17 CZECHOSLAVAKIA	1 440	0.5	1 220	84.7	56	3.9	799	55.5	586	40.7
18 TURKEY, LEBANON	1 300	0.4	886	68.2	237	18.2	503	38.7	560	43.1
19 U.S.S.R.	1 273	0.4	1 121	88.1	42	3.3	678	53.3	552	43.4
20 OTHER AMERICA	1 157	0.4	329	28.4	536	46.3	301	26.0	320	27.7
21 EGYPT	1 074	0.4	850	79.1	39	3.6	613	57.1	421	39.2
22 CANADA	1 010	0.3	290	28.7	346	34.3	427	42.3	236	23.4
23 OTHER OCEANIA	1 000	0.3	767	76.7	249	24.9	303	30.3	448	44.8
24 AT SEA	18		14	77.8	0		10		8	
TOTAL	293 222		139 731	47.7	34 045		159 595	54.4	9 584	34.0

SOURCE: ABS Census, June 1976 (Table 10)

TABLE 20 AUSTRALIA : ARRIVALS BY COUNTRY OF CITIZENSHIP SUMMARISED BY REGIONS 1976 - 1980

REGION (COUNTRY OF CITIZENSHIP)	1976 - 1977		1977 - 1978		1978 - 1979		1979 - 1980	
	number	percent	number	percent	number	percent	number	percent
1 UK and EIRE	20 161	28.4	23 868	31.5	14 782	21.5	16 397	20.2
2 NORTHERN EUROPE	2 875	4.1	4 493	5.9	4 237	6.2	7 143	8.8
3 SOUTHERN EUROPE	8 049	11.4	6 885	9.1	5 518	8.0	6 775	8.3
4 MIDDLE EAST	14 200	20.0	4 698	6.2	2 707	3.9	2 684	3.3
5 NORTH AMERICA	1 725	2.4	1 892	2.5	1 897	2.8	2 512	3.1
6 SOUTH and CENTRAL AMERICA	3 362	4.7	3 258	4.3	2 467	3.6	1 796	2.2
7 AFRICA	1 508	2.1	2 643	3.5	3 129	4.6	3 985	4.9
8 ASIA	7 525	10.6	16 329	21.6	19 713	28.7	23 183	28.5
9 OCEANIA	8 488	12.0	11 666	15.4	14 299	20.8	16 796	20.7
10 OTHER and NOT STATED	3 023	4.3	-	-	-	-	-	-
TOTAL	70 916	100.0	75 732	100.0	68 749	100.0	81 271	100.0

SOURCE: Dept. of Immigration and Ethnic Affairs, Adelaide.

TABLE 21

SOUTH AUSTRALIA AS INTENDED RESIDENCE AT TIME OF DISEMBARKATION 1977-1978 TO 1979 - 1980 BY REGION OF LAST CITIZENSHIP

REGION	1977 - 1978		1978 - 1979		1979-1980 (PRELIMINARY)	
	no.	percent	no.	percent	no.	percent
1 UK and EIRE	2 736	56.6	1 185	34.1	1 335	26.7
2 NORTHERN EUROPE	290	6.0	243	7.0	286	5.7
3 SOUTHERN EUROPE	415	8.6	259	7.5	186	3.7
4 MIDDLE EAST	61	1.3	32	0.9	12	0.2
5 NORTH AMERICA	110	2.3	108	3.1	128	2.7
6 SOUTH and CENTRAL AMERICA	83	1.7	25	0.7	-	-
7 AFRICA	105	2.2	121	3.5	98	2.0
8 ASIA	533	11.0	982	28.3	1 858	37.1
9 OCEANIA	507	10.5	521	15.0	665	13.3
10 OTHER and NOT STATED	-		-		439	8.8
TOTAL	4 845	100.0	3 476	100.0	5 007	100.0

SOURCE: Compilation of cards completed by inward passengers on arrival Dept. of Immigration and Ethnic Affairs, Adelaide.

achieve ready access to the services they need and to perform the proper functions of a citizen. There are about a quarter of a million residents in the State from a variety of non-English language countries. Many of these are adults who require special educational assistance. The Department of Further Education provides that assistance. In addition, there are about 15 000 residents with no English who clearly require urgent help to realise their true citizenship potential.

The challenge of planning ahead for TAFE provisions, and responding adequately to existing demands, is amply demonstrated by the analysis in this Chapter.

Providing suitable educational programmes to meet the needs of the foreign born is complicated by several demographic factors; there are as many as twenty separate and significant language and cultural groups involved and many even smaller ones; important differences exist both within and between groups in the age and educational characteristics of the various populations. The recent shifts in the composition of new immigrants entering the state imply that further adjustments will have to be made to the educational programmes provided.

6. GENERAL SUMMATION

While this paper is intended as an exposition of demographic forces at play rather than as an interpretive analysis, certain conclusions seem appropriate. There are two main features which emerge from a consideration of the present and likely future demographic trends in South Australia. The one is the great levelling out of numbers aged below twenty because of the decline in birth rates. The other is the continued substantial increase in the older age groups as the "bulge" of former years ages through the life cycle.

The educational implications seem clear (the solutions less clear). On the one hand the demands for the services of the traditional sectors (schools, universities and colleges) can be expected to remain relatively static for ten to twenty years at least. It is likely that there will be requirements in those sectors for internal readjustments of a "fine tuning" nature. On the other hand the demand for the wide range of presently less-well-provided "adult education" largely supplied through technical and further education (TAFE) can be predicted to expand. The expansion brought about through natural aging of the population can be expected to be intensified through continuance of the trend towards increased rates of participation. There are obvious resource implications.

It cannot however be a source of unreserved encouragement to the Department of Further Education that both the broad and more specific projections possible on the basis of the data in this paper indicate greater numbers of students. There are other projections which bear the same message. Approximately 60 per cent of D.F.E. courses are vocational by any count (Streams 1-4). These courses are developed in close concert with industry. The educational demands of industry in a sense override population projections and trends in determining TAFE enrolments. Increasing demands from this quarter are noted in another extensive Occasional Paper in this series.

The situation then which seems to face those concerned to develop TAFE in South Australia is one of continuing, and growing, demand; a situation reminiscent of that which led to expansion of compulsory school systems in the 60s and early 70s.

The planning dilemma for TAFE is that the projections cannot be ignored - forecast expansion in TAFE enrolments (during the 70s) has indeed taken place - but nor can the lesson of too great reliance on population and industrial trends. It is not inappropriate to emphasize the unsteady foundations on which the future scenerio in the first two paragraphs of this Chapter has been cautiously erected.

APPENDIX A

CALCULATION OF PROJECTED STATE PARTICIPATION RATES AND THEIR PRACTICAL APPLICATION

Projected participation rates are derived from projected enrolments for the state compared with projected population figures for the same area.

The population figures used are the 'most likely projections' calculated by the Economic Intelligence Unit of the Premier's Department or its equivalent as official government projections. Three projection points were used here - 1981, 1986 and 1991. The starting point was the averages of population and enrolments for the years 1975, 1976 and 1977.

For the period 1975-1977 an average of enrolments and of participation rates was calculated, for each of the TAFEC age/sex groups and for the total 15+ population. From this reference point, participation rates for the total 15+ population were estimated for the projection years, at three levels, a low, medium and high.

The application of each of these rates to the projected population figures produced total projected enrolment figures for each projection year. This total was then divided amongst the eight TAFEC age/sex groups. This was done in three stages.

(i) For each projection year the average participation rate for 1975-77 for each age/sex group was applied to projected population figures. The resultant enrolment figures were summed. The difference between this total and that obtained by application of a participation rate for the total 15+ population, was distributed across the age/sex groups as follows.

(ii) Two-thirds of the difference (which in the case of the low projection was very small) was distributed in proportion to each age/sex group's share of the projected population growth.

(iii) The remaining third was distributed in proportion to the share of enrolments taken by each age/sex group as at 1975-77.

This method means that the present pattern of participation by age and sex has largely been retained, and the modification reflects the relative rates of change of groups within the population.

Once enrolment projections for each age/sex group were available these were divided by the appropriate projected population figures, to give projected participation rates for each age/sex group.

Before further use it was necessary to make certain discounted adjustments to the base rates (1975-77) to compensate for changes brought about with the replacement of the manual system by a computerised one.

The computerised system of enrolment data collection on which the projections are based has involved changes in definitions and data aggregation, which have created a discontinuity between data collected before the end of 1977 and subsequent actual and projected enrolment data. Different rates of discount were applied to the various age/sex groups according to observed change.

SOUTH AUSTRALIA : D.F.E. PREDICTED PARTICIPATION RATIOS , MANUAL/COMPUTER DATA DISCOUNTED BY
15-19M 20% 15-19F 12% 20-29M 31% 20-29F 27% 30-59M 8% 30-59F 8% 60+M 0% 60+F 0%

AGE GROUP	SEX	YEAR											
		1981				1986				1991			
		POPULATION	HIGH	MED	LOW	POPULATION	HIGH	MED	LOW	POPULATION	HIGH	MED	LOW
15-19	male	60789	24·81	24·57	24·33	58590	25·00	24·69	24·33	53422	28·82	27·23	25·63
	female	56861	18·63	18·39	18·15	55471	18·80	18·50	18·15	50625	22·56	20·99	19·43
	total	117650	21·82	21·58	21·34	114061	21·98	21·68	21·32	104047	25·78	24·20	22·61
20-29	male	114152	23·14	21·25	19·36	120608	23·31	21·29	18·97	118723	20·06	19·02	17·97
	female	113605	23·19	21·09	19·00	117890	21·06	19·55	17·82	114499	19·42	18·38	17·33
	total	227757	23·16	21·17	19·18	238502	22·19	20·43	18·40	233222	19·75	18·70	17·66
30-59	male	238375	14·39	12·17	9·95	256145	17·17	13·98	10·32	279544	20·55	16·08	11·60
	female	232982	17·46	15·00	12·55	253103	20·97	17·31	13·11	280298	25·07	19·86	14·65
	total	471357	15·91	13·57	11·23	509248	19·06	15·64	11·71	559842	22·82	17·97	13·13
60+	male	83298	12·94	9·37	5·80	94487	19·56	13·75	7·10	102885	14·82	10·29	5·76
	female	106844	13·02	9·75	6·48	120573	19·96	14·37	7·96	130731	15·35	11·00	6·65
	total	190142	12·98	9·58	6·18	215060	19·78	14·10	7·58	233619	15·12	10·69	6·25
TOTAL	male	496614	17·43	15·30	13·17	529830	19·86	16·79	13·27	554577	20·18	16·71	13·23
	female	510292	17·93	15·64	13·30	547041	20·55	17·26	13·50	576153	21·52	17·66	13·79
	total	1006906	17·67	15·47	13·26	1076871	20·21	17·03	13·38	1130730	20·87	17·19	13·52

SOURCE: J. Glowik, DFE Research Branch, 1978.

The final discounted rates are attached.

These rates have been applied to the official population projections for the state. Only the medium level has been used in this study, but all three rates appear on the table.

APPENDIX B

GENERAL METHODOLOGY USED IN STATISTICAL PROJECTION AND FORECASTING OF ENROLMENTS IN THE DEPARTMENT OF FURTHER EDUCATION

1. INTRODUCTION

The Department of Further Education is a state-wide system which comprises about thirty separate institutions with more than 150 000 individuals enrolled in a great diversity of courses. Most system-wide statistical functions, other than finance, are operated through the Research Branch in Head Office. Here is maintained a new and developing computerised enrolment system capable of serving a variety of purposes, including analysis of enrolment patterns and trends for use in all aspects of educational planning. This capability will be further enhanced with eventual incorporation into a full scale 'Management Information System'.

Many of the major factors influencing the level and nature of enrolments in its courses are external to the department and therefore beyond its control. The potential clientele is the entire population aged fifteen years and above and available to it, at least in the ideal, is the complete, diverse range of courses. Estimation of future enrolments is rather akin, therefore, to market research to anticipate future shifts in the pattern of product consumption, whether in geographic distribution, in magnitude and type of product taken or in a manner of presentation.

The following discussion is in two main sections: a broad outline of projection work and a more detailed coverage of data sources and methodology for enrolment projections.

2. OUTLINE OF PROJECTION WORK IN FURTHER EDUCATION

2.1. Forecasts at Institutional Level

When such forecasts are required by senior management (including the Planning Committee) they are part of specially researched reports prepared on the educational needs and development of areas served by specific colleges of further education.

Three broad sources of information are utilised in preparation of these enrolment projections.

(a) The Department's own enrolment records: These indicate trends, not only in specific courses but in the relative mix and balance of the multitude of sub-factors, e.g. full-time, part-time, vocational, non-vocational, trade, certificate, short course, long course, day or evening attendance. They also indicate trends in the population characteristics of the student population - age, sex, location of residence and work.

(b) Population information and population projections: The first is derived from the Australian Bureau of Statistics (ABS) and population projections are generated on the basis of assumptions officially accepted by the State Government.

(c) Special surveys of the geographical areas concerned: Use is made of any survey material resulting from work conducted by other agencies and where possible the Department of Further Education surveys its own students and also selected members of the community being studied.

The standard method uses participation rates for specified age/sex groups based on observed participation in the area compared with a state or city norm. The participation rates are applied to projected future populations to derive a likely number of future enrolments - age/sex specific and/or gross numbers.

The participation rates applied in enrolment projections are modified by taking account of the broad sweep of social and economic trends and local developments, actual and expected, which are likely to impinge upon future enrolment patterns. For enrolment studies projects the time horizon employed is usually 10 to 15 year spans. Generally a range is produced indicating on the one hand an ultra-conservative minimum and a conservative 'most likely'.

2.2. Forecasts at State or Regional Level

State-wide projections are supplied annually as part of the rolling triennial planning submissions to the Tertiary Education Commission. Planning in the metropolitan area, for a particular college, often necessitates a broad regional view because of the wide repercussions of change made even in one place. The methods used and data employed at this broad scale are essentially the same as those at the institutional level.

3. SOURCES OF INFORMATION AND PROJECTING METHODOLOGY

3.1. Forecasting at the Single Institutional Level

3.1.1. Objectives of the Method

To provide forecasts covering the next fifteen to twenty years of the likely numbers of enrolments attached to a nominated institution:

(i) by overall numbers
(ii) by likely age and sex distribution
(iii) by specific educational categories
Iiv) by day and night attendance at the major facilities.

To assess the impact of any statistical changes upon neighbouring institutions as well as the one nominated.

3.1.2. Source of data

(i) Individual enrolment records collected by separate institutions (The one nominated and any others where residents of the area may attend or from which attendance may come) and held on computer file by the Head Office of the Department of Further Education. These show post code of student residence.

(ii) Population data from the Australian Bureau of Statistics.

(iii) Population projections for the State and the Adelaide Statistical Division revised and released from time to time as official S.A. State Government estimates. Only the 'most likely' strand is used. Special manipulations are required to produce suitable projections for the specially defined study areas associated with a given institution. So far this work has been done in conjunction with the Education Department using its 'small area forecasting' formula and computer programme.

(iv) A series of geographic study areas are defined centring on the nominated institution. To facilitate comparability of data the boundaries must conform to official statistical units. Post codes are used in DFE because actual student distribution is available for these areas and all other data can be expressed in them also. In determining the study areas consideration is given to the existing 'natural', community areas, the fact that all students except those in basic trades (apprenticeships) are voluntary and unzoned, that students are willing to travel different distances for different activities and that the institution operates from a multi-campus network by day and by night. Account is also taken of existing similar neighbouring institutions.

(v) Geographic distribution of enrolments by post code of residence is assembled for all students from the study area taking note of which institution is attended. A matrix is prepared to show for each educational activity the percentage attending from the study area at each institution. Comparison shows the relative importance to students of each institution for different activities.

Also arising from the geographic gatherings of enrolments is an age/sex analysis of enrolments by educational category. This in turn is compared with the age/sex distribution of the population of the same area. Such comparison is expressed as age/sex specific participation rates.

3.1.3. Methodology

In each case projections are provided across a range indicated by three strands, each derived from assumptions about future participation rates in Further Education. These are a low, which assumes no change from the present participation (constant) in further education, a medium and a high rate of participation. The latter two rates are selected subjectively in the light of observed trends in local and overseas systems - with present judgments being decidedly conservative.

(i) Overall enrolment projections - undifferentiated by age and six:

The following four elements are required:

- the average enrolment for the most recent three years = e
- the average population aged 15 years and over for the same time span = p
- the average participation (P) rate (%) is calculated

$$P = \frac{e}{p} \times 100$$

. separate projections for the required years (i to j) for the population aged 15 or more years = pi to pj

Estimates of future enrolments (E) are obtained separately for each designated year

E = P.pi

(ii) Enrolment differentiated by age and sex

The same four basic information elements as described about in (i) are required, but in addition broken into specific age and sex groups. Projections are obtained for these groups by application of the same method as in (i) above.

It is important to note that age and sex shifts within enrolments can and do occur independently of shifts within the age/sex structure of the popuation. By applying various assumptions about the magniturde and timing of such future shifts the consequences can be followed across the projected years within the expected population structure.

(iii) Specific Educational Categories

Enrolment data in specific educational categories is available if required down to the level of individual subject enrolments. For forecasting purposes, age and sex information is gathered for certain broad educational groupings. Projections within these categories follow the methodology outlined in Section (2).

An important underlying assumption is usually made that participation where it is found to differ significantly from the norm (State metropolitan or country) will tend over time to approximate even more closely to the growth across the whole community, unless reason to depart from this can be demonstrated.

(iv) Attendance by day and night at major facilities

Because facilities available for day classes are a limiting factor in most enrolments, it is necessary to estimate future division of enrolments between day and evening attendance. This projection is based upon observed present patterns in either the particular nominated institution or if presently not offering the desired programme, in a comparable one elsewhere.

3.2. Enrolment Forecasting at State, Metropolitan or Non-metropolitan Level

3.2.1. Objectives of the Method

To provide forecasts covering the next twenty years of the likely numbers of enrolments in the State-wide system (and later for sub areas) by:

(i) overall numbers, and
(ii) likely age and sex distribution

3.2.2. Source Data

(iii) individual enrolment records collected by separate institutions and held on computer file by the Head Office of the Department of Further Education

(iv) Population data from the Australian Bureau of Statistics

(v) Population projections revised and released from time to time as official S.A. State Government estimates. Only the 'most likely' strand is used as the extremes seem toowide for our planning purposes.

3.2.3. Methodology

In each case projections are provided across the range indicated by three strands, each derived from assumptions about future participation rates in Further Education. These are a low, which assumes no change from the present participation (constant) in further education, a medium and a high rate of participation. The latter two rates are selected subjectively in the light of observed trends in local and overseas systems - with present judgements being decidedly conservative.

It is important to note that age and sex shifts within enrolments can and do occur independently of shifts within the age/sex structure of the population. By applying various assumptions about the magnitude and timing of such future shifts the consequences can be followed across the projected years within the expected population structure.

(i) Overall enrolment projections - undifferentiated by age and sex.

The following four elements are required

. The average enrolment for the most recent three years = e

. The average population aged 15 years and over for the same time span = p

. The average participation (P) rate (%) is calculated

$$P = \frac{e}{p} \times 100$$

. Separate projections for the required years (i to j) for the population aged 15 or more years = pi to pj

Estimates of future enrolments (E) are obtained separately for each designated year

$$E = P.pi$$

(ii) Enrolment differentiated by age and sex.

The same four basic information elements as described above in (i) are required, but in addition broken into specific age and sex groups. Projections are obtained for these groups by application of the same method as in (i) above.

APPENDIX C

ACADEMIC STREAMS IN TECHNICAL AND FURTHER EDUCATION

STREAM	NAME	DESCRIPTION
1	PROFESSIONAL	Courses which lead to professional status (including teacher education) or which enable professionals to update their technology or to specialise.
2	PARA-PROFESSIONAL	Courses provided for those preparing to enter or progress within middle-level or technician occupations. Includes a wide range of 'certificate' courses and some 'special' courses which are similar in complexity and purpose. Includes also short courses designed to enable para-professionals to update their technology or to specialise.
3	TRADES	All courses leading to occupations for which apprenticeship exists, and post-trade courses for advanced skills of a non-technician nature.
4	OTHER SKILLED	All other skilled trade and vocational courses relevant to basic principles, skills or knowledge but which are not included in Stream 3. Includes short training courses in additional on-the-job skills.
5	PREPARATORY	All courses which can be broadly described as preparatory (matriculation and diploma entrance courses), remedial (mathematics, English for migrants etc.), and courses with vocational orientation not classified elsewhere.
6	ADULT EDUCATION	All courses in home handicrafts, hobbies, self-expression and cultural appreciation, including language courses.

SOURCE: DFE Submission to Committee of Enquiry into Education in South Australia (Chapter 6, Table 6.1)

APPENDIX D

FIELDS OF STUDY IN TECHNICAL AND FURTHER EDUCATION

FIELD OF STUDY	NAME	DESCRIPTION
1	APPLIED SCIENCE	Includes physics, chemistry, chemical technology, ecology and life sciences, meteorology, mathematics, materials technologies and laboratory services.
2	ART AND DESIGN	Includes fine and graphic arts; architecture and town planning; materials and media studies (art metalwork, gold and silver smithing, etc.); broadcasting, film making and photographic technology.
3	BUILDING	Includes building construction technologies; carpentry and woodwork and timber technology; furniture and furnishings; plumbing, water supply and sewerage courses.
4	BUSINESS STUDIES	Includes accounting, banking and financial studies; data processing; management and supervision; marketing and sales; secretarial services and other business studies.
5	ENGINEERING	Includes air conditioning; automotive technology; aircraft technology; civil and structural drafting; communication technology; civil engineering; electrical and electronic engineering and drafting; foundry engineering and practice; hydraulic and pneumatic systems and engineering; instrument engineering and making; mechanical engineering and drafting, etc.; mining technology; marine technology and ship-building; non-ferrous metal technologies; production engineering; plant operation; refrigeration trades; surveying; and motor body building and design.
6	RURAL AND HORTICULTURAL	Includes agriculture, farm management and sheep and wool studies; horticulture and soil science; fisheries, wild life and veterinary services.
7	MUSIC	Includes composition, instrumental music, orchestral groups, choral singing and music theory.
8	PARA-MEDICAL	Includes audiometry; dental laboratory mechanics and services; medical laboratory and services; pharmacy and pharmaceutical services; hospital procedures; and optical fitting and surfacing.
9a	INDUSTRIAL SERVICES NOT ELSEWHERE CLASSIFIED	Includes aircraft and marine operations; clothing; textile and footwear trades and techniques; food processing; printing; watch and clock making.
9b	PERSONAL SERVICES NOT ELSEWHERE CLASSIFIED	Includes food presentation; hairdressing; waiter and waitress training; library studies; home economics; physical education.
10	GENERAL STUDIES	Includes drama, speech and languages; school subjects taken as part of course not classifiable elsewhere; sociological studies; humanities.

SOURCE: D.F.E. Submission to Committee of Enquiry into Education in South Australia (Chapter 6, Table 6.2)

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